Applied Science & Technology Index

1961

Abbreviations of Periodicals Indexed

For full information consult pages ix to xi

A I Ch E J—Journal of the American Institute of Chemical Engineers
ARS J—ARS Journal
ASHRAE J—ASHRAE Journal
A S M E Trans—Transactions of the American Society of Mechanical Engineers
A S T M Bul—Bulletin of the American Society for Testing Materials
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Aircraft Eng—Aircraft Engineering
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Am Cer Soc Bul—Bulletin of the American Ceramic Society
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Am Chem Soc J—Journal of the American Chemical Society
Am Concrete Inst J—Journal of the American Concrete Institute
Am Dyestuff Rep—American Dyestuff Reporter
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Concrete—Concrete
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Corrosion—Corrosion

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Electronic Ind—Electronic Industries
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Electronics—Electronics
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Eng & Min J—Engineering and Mining Journal
Eng J—Engineering Journal
Eng N—Engineering News-Record
Engineer—Engineer
Engineering—Engineering
Equip Supt—Equipment Superintendent

Food Eng—Food Engineering
Food Tech—Food Technology
Foundry—Foundry
Franklin Inst J—Journal of the Franklin Institute

Gas—Gas
Gas Age—Gas Age
Geol Soc Bul—Bulletin of the Geological Society of America
Geophysics—Geophysics
Glass Ind—Glass Industry

Heating-Piping—Heating, Piping and Air Conditioning
Hydraulics & Pneumatics—Hydraulics and Pneumatics
Hydrocarbon Process & Pet Refiner—Hydrocarbon Processing and Petroleum Refiner

I S A J—ISA Journal
Illum Eng—Illuminating Engineering, The Journal of the Illuminating Engineering Society
Ind & Eng Chem—Industrial and Engineering Chemistry
Ind Chem—Industrial Chemist
Ind Finishing—Industrial Finishing
Ind Med—Industrial Medicine and Surgery
Ind Phot—Industrial Photography
Ind Quality Control—Industrial Quality Control

ABBREVIATIONS OF PERIODICALS INDEXED

Inland & Am Ptr & Lithogr—Inland and American Printer and Lithographer
Inland Ptr/Am Lithogr—Inland Printer/American Lithographer
Inst E E Proc—Proceedings of the Institution of Electrical Engineers
Inst Mech Eng Proc—Proceedings of the Institution of Mechanical Engineers
Inst Metals J—Journal of the Institute of Metals
Inst Pet J—Journal of the Institute of Petroleum
Inst Radio Eng Proc—Proceedings of the Institute of Radio Engineers
Instrument Soc Am J. See I S A J
Instruments & Control Systems—Instruments and Control Systems
Iron Age—Iron Age
Iron & Steel Eng—Iron and Steel Engineer
Iron & Steel Inst J—Journal of the Iron and Steel Institute

J Aerospace Sci—Journal of the Aerospace Sciences
J Agri & Food Chem—Journal of Agricultural and Food Chemistry
J Ap Chem—Journal of Applied Chemistry
J Ap Mech. See ASME Trans
J Ap Phys—Journal of Applied Physics
J Basic Eng. See A S M E Trans
J Colloid Sci—Journal of Colloid Science
J Eng Ind. See A S M E Trans
J Eng Power. See A S M E Trans
J Geol—Journal of Geology
J Heat Transfer. See A S M E Trans
J Math & Phys—Journal of Mathematics and Physics
J Metals—Journal of Metals
J Nutrition—Journal of Nutrition
J Pet Tech—Journal of Petroleum Technology
J Res Nat Bur Stand—Journal of Research of the National Bureau of Standards
J Sci Instr—Journal of Scientific Instruments

Light Metal Age—Light Metal Age
Lub Eng—Lubrication Engineering

Mach—Machinery
Machine Design—Machine Design
Mag of Stand—Magazine of Standards
Manuf Chem—Manufacturing Chemist
Marine Eng/Log—Marine Engineering/Log
Materials in Design Eng—Materials in Design Engineering
Materials Res & Stand—Materials Research and Standards
Math & Math Phys. See J Res Nat Bur Stand
Mech Eng—Mechanical Engineering
Metal Finishing—Metal Finishing
Metal Prog—Metal Progress
Metallurgia—Metallurgia, the British Journal of Metals
Mill & Factory—Mill & Factory
Min Cong J—Mining Congress Journal
Min Eng—Mining Engineering
Mod Materials Handling—Modern Materials Handling
Mod Metals—Modern Metals
Mod Phot—Modern Photography
Mod Plastics—Modern Plastics
Mod Textiles Mag—Modern Textiles Magazine

Noise Control—Noise Control
Nucleonics—Nucleonics

Oil & Gas J—Oil and Gas Journal
Op Res—Operations Research

Paint Oil & Chem R—Paint, Oil and Chemical Review
Paper Ind—Paper Industry
Pet Eng—Petroleum Engineer for Management
Pet Management—Petroleum Management
Pet Refiner—Petroleum Refiner
Phys & Chem. See J Res Nat Bur Stand
Phys Today—Physics Today
Pit & Quarry—Pit and Quarry
Plant—Plant Management and Engineering
Plant Eng—Plant Engineering
Plastics Tech—Plastics Technology
Plastics World—Plastics World
Plating—Plating
Power—Power
Power Apparatus & Systems—Power Apparatus and Systems
Power Eng—Power Engineering
Product Eng—Product Engineering
Prog Arch—Progressive Architecture
Pub Roads—Public Roads
Pub Works—Public Works

Q S T—QST

RCA R—RCA Review
R Sci Instr—Review of Scientific Instruments
Radio Corp Am R. See RCA R
Radio-Electronics—Radio-Electronics
Radio Propagation. See J Res Nat Bur Stand
Res/Develop—Research/Development
Research—Research, Applied in Industry
Roads & Sts—Roads and Streets
Rock Prod—Rock Products
Roy Aeronautical Soc J—Journal of the Royal Aeronautical Society
Rubber Age—Rubber Age
Rubber Chem & Tech—Rubber Chemistry and Technology
Rubber World—Rubber World

S A E J—SAE Journal
SMPTE J—Journal of the Society of Motion Picture and Television Engineers
Safety Maint—Safety Maintenance
Sci Am—Scientific American
Soap & Chem Spec—Soap and Chemical Specialties
Soc Automotive Eng J. See S A E J
Soc Dyers & Col J—Journal of the Society of Dyers and Colourists
Soc Motion Picture & Tv Eng J. See SMPTE J
Space/Aeronautics—Space/Aeronautics
Steel—Steel

Tappi—Tappi
Tech Assn Pulp & Paper Ind. See Tappi
Textile Ind—Textile Industries
Textile Res J—Textile Research Journal
Textile World—Textile World
Tool & Manuf Eng—Tool and Manufacturing Engineer
Traffic Q—Traffic Quarterly

WPCF J—Journal of the Water Pollution Control Federation
Water & Sewage Works—Water & Sewage Works
Water Works Eng—Water Works Engineering
Welding Eng—Welding Engineer
Welding J—Welding Journal
Westinghouse Eng—Westinghouse Engineer
Wire & Wire Prod—Wire and Wire Products
Wireless World—Wireless World

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EDITED BY
ROBERTA PURDY

INDEXER
ELSA TOOM

MANAGING EDITOR
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R. P.

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ASHRAE Journal. $5 m American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 345 E 47th St. New York 17

Aerospace Engineering. $10 m Institute of the Aeronautical Sciences. Inc. 2 E 64th St. New York 21

Air Conditioning, Heating and Ventilating. $5 m Industrial Press. 93 Worth St. New York 13

Aircraft Engineering. 40s; U.S. $6.50; Canada $6.50 m Bunhill Publications, Ltd. 12 Bloomsbury Square. London. W.C. 1

American Association of Petroleum Geologists Bulletin. $18 m American Association of Petroleum Geologists, Inc, Box 979, Tulsa 1, Okla.

American Ceramic Society Bulletin. $6 m American Ceramic Society, 4055 N High St. Columbus 14, Ohio

American Ceramic Society Journal; Ceramic Abstracts. $20 including Ceramic Bulletin m American Ceramic Society. 4055 N High St. Columbus 14, Ohio

American Chemical Society Journal. $30 s-m American Chemical Society, 1155 16th St. N.W. Washington 6, D.C.

American Concrete Institute Journal. $18 m American Concrete Institute, P.O. Box 4754 Redford Station, Detroit 19, Mich.

American Dyestuff Reporter. $7.50 bi-w Howes Pub. Co. Inc. 44 E 23d St. New York 10

American Gas Association Monthly. $5 m (bi-m Jl-Ag) American Gas Assn. Inc. 420 Lexington Av. New York 17

American Institute of Chemical Engineers Journal. $12 q American Institute of Chemical Engineers. 345 E 47th St. New York 17

American Journal of Clinical Nutrition. $8 m The American Journal of Clinical Nutrition. Inc. 466 Lexington Av. New York 17

American Journal of Physics. $10 m American Institute of Physics. Inc. 335 E 45th St. New York 17

American Journal of Public Health and the Nation's Health. $15 m American Public Health Association. Inc. 1790 Broadway. New York 19

American Machinist/Metalworking Manufacturing. $3 bi-w McGraw-Hill Pub. Co. Inc. 330 W 42d St. New York 36

American Mineralogist. bi-m U.S. Geological Survey. Washington 25. D.C.

American Oil Chemists' Society Journal. $8 m American Oil Chemists' Society. 35 E Wacker Drive. Chicago 1

American Perfumer. $5 m Allured Pub. Corp. 418 N. Austin Blvd. Oak Park. Ill.

American Scientist. $2.50 q Sigma Xi, 51 Prospect St. New Haven 11. Conn.

American Society for Testing Materials Bulletin. $3.50 8 times a year American Society for Testing Materials, 1916 Race St. Philadelphia 3

Name changed to Materials Research and Standards January, 1961

American Society of Civil Engineers Proceedings. m American Society of Civil Engineers, 345 E 47th St, New York 17

American Society of Mechanical Engineers Transactions. $10 American Society of Mechanical Engineers, 345 E 47th St. New York 17

Published in 5 parts: ser A, Journal of Engineering for Power, q (Ja); ser B, Journal of Engineering for Industry, q (F); ser C, Journal of Heat Transfer, q (F); ser D, Journal of Basic Engineering, q (Mr); ser E, Journal of Applied Mechanics, q (Mr)

$5 to members and affiliates

American Society of Naval Engineers Journal. $12 q American Society of Naval Engineers, Inc, 1012 14th St, N.W. Washington 5, D.C.

American Water Works Association Journal. m American Water Works Assn, Inc, 2 Park Av, New York 16

Analytical Chemistry. $5 m American Chemical Society, 1155 16th St. N.W. Washington 6, D.C.

Applications and Industry. $8 bi-m American Institute of Electrical Engineers, 345 E 47th St. New York 17

Architectural Forum, The Magazine of Building. $6.50 m Time, Inc, Life and Time Building, New York 20

Architectural Record. $5.50 m F. W. Dodge Corp. 119 W 40th St. New York 18

Extra number published in Mid-May

Archives of Environmental Health. $8 m American Medical Association. 535 N Dearborn St. Chicago 10

Association for Computing Machinery Journal. $10 q Association for Computing Machinery, 14 E 69th St. New York 21

Audio. $4 m Radio Magazines. Inc. 204 Front St. Mineola. New York

Audio Engineering Society Journal. $11 q Audio Engineering Society, P.O. Box 12, Old Chelsea Station, New York 11

Automation; The Magazine of Automatic Manufacturing Operations. $10 m Penton Pub. Co. Penton Bldg. Cleveland 13

Automobile Engineer. £3; U.S. $8.50; Canada $8.50 m Iliffe Production Publications, Ltd. Dorset House, Stamford St. London. S.E. 1

Extra number published in November

Automotive Industries. $10 s-m Chilton Co. Chestnut & 56th Sts. Philadelphia 39

Bell Laboratories Record. $2 m Bell Telephone Laboratories, Inc, 463 West St, New York 14

Bell System Technical Journal. $5 bi-m American Telephone and Telegraph Co. 195 Broadway, New York 7

British Institution of Radio Engineers Journal. £5 10s m British Institution of Radio Engineers, 9 Bedford Square, London, W.C. 1

British Plastics. £2 12s; U.S. $7.50; Canada $7.50 m Iliffe Industrial Publications, Ltd. Dorset House, Stamford St. London, S.E. 1

Canadian Chemical Processing. $6; U.S. $10 m Southam-Maclean Publications, Ltd. 1450 Don Mills Rd. Don Mills, Ontario, Canada

Canadian Journal of Chemical Engineering. $6; U.S. $7 bi-m Chemical Institute of Canada, 48 Rideau St. Ottawa 2, Ont.

Canadian Mining and Metallurgical Bulletin. $10; U.S. $12 m Canadian Institute of Mining and Metallurgy. 906 Drummond Bldg. Montreal. Que.

Ceramic Industry. $5 m Cahners Pub. Co. Inc. 5 So. Wabash Av. Chicago 3

Chemical & Engineering News. $6 w American Chemical Society. 1155 16th St. N.W. Washington 6. D.C.

Chemical Engineering. $25 bi-w McGraw-Hill Pub. Co. Inc. 330 W 42d St. New York 36

Chemical Engineering Progress. $6 m American Institute of Chemical Engineers. 345 E 47th St. New York 17

Chemistry and Industry. £5 w Society of Chemical Industry. 14 Belgrave Square. London. S.W. 1

Civil Engineering, the Magazine of Engineered Construction. $5 m American Society of Civil Engineers. 345 E 47th St. New York 17

Coal Age. $3 m McGraw-Hill Pub. Co. Inc. 330 W 42d St. New York 36

Combustion. $4 m Combustion Pub. Co, Inc, 200 Madison Av. New York 16

Communication and Electronics. $8 bi-m American Institute of Electrical Engineers. 345 E 47th St. New York 17

Compressed Air Magazine. $5 m Compressed Air Magazine Co, 942 Memorial Parkway, Phillipsburg, N.J.

Concrete. $6 m Concrete Pub. Corp, 400 W Madison St, Chicago 6

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Control Engineering. $3 m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36

Corrosion. $10 m National Association of Corrosion Engineers, Inc, 1061 M & M Bldg, Houston 2, Tex.

Diesel Power. $4 m Diesel Publications, Inc, 80 Lincoln Av, Stamford, Conn.

Changed to Equipment Superintendent July, 1961

Domestic Engineering. $5 m Domestic Engineering Co, 1801 Prairie Av. Chicago 16

Drug and Cosmetic Industry. $3 m Drug Markets, Inc. 101 W 31st St. New York 1

Economic Geology and the Bulletin of the Society of Economic Geologists. $8.50 s-q Economic Geology Pub. Co, M. M. Leighton, Business Mgr. Urbana. Ill.

Electrical Communication. $2 q International Telephone and Telegraph Corp. 320 Park Av. New York 22

Electrical Construction and Maintenance. $15 m McGraw-Hill Pub. Co, 330 W 42d St, New York 36
Extra number published in Mid-September

Electrical Engineering. $12 m American Institute of Electrical Engineers, 345 E 47th St, New York 17

Electrical World. $6 w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36

Electro-Technology. $15 m Conover-Mast Publications, Inc, 205 E 42d St, New York 17

Electrochemical Society Journal. $24 m Electrochemical Society, 30 E 42d St, New York 17

Electronic Engineering. £1 16s; U.S. $5; Canada $5 m Morgan Brothers, Ltd, 28 Essex St, Strand, London, W.C. 2

Electronic Industries. $10 m Chilton Co, Chestnut & 56th Sts, Philadelphia 39

Electronic Technology. £3 7s; U.S. and Canada $9.50 m Iliffe Electrical Publications Ltd, Dorset House, Stamford St, London, S.E. 1

Electronics. $6 w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36
Extra number, Buyers' Guide and Reference Issue July 20

Engineer. £5 10s; Canadian subs £5 5s w Morgan Brothers, Ltd, 28 Essex St, Strand, London, W.C. 2

Engineering. £5 10s; Canadian subs £5 5s w Engineering Ltd, 36 Bedford St, London, W.C. 2

Engineering and Mining Journal. $4 m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36

Engineering Journal. $6 m Engineering Institute of Canada, 2050 Mansfield St, Montreal 2, Que.

Engineering News-Record. $6 w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36

Equipment Superintendent. $4 m Diesel Publications, Inc, 80 Lincoln Av, Stamford, Conn.
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Food Engineering. $2 m Chilton Co, Chestnut & 56th Sts, Philadelphia 39

Food Technology. $11 m Institute of Food Technologists, 176 West Adams St, Chicago 3

Foundry. $10 m Penton Pub. Co, Penton Bldg, Cleveland 13

Franklin Institute Journal. $10 m Franklin Institute of the State of Pennsylvania, Benjamin Franklin Parkway at 20th St, Philadelphia 3

Gas. $15 m Chilton Co, 56th & Chestnut Sts, Philadelphia 39

Gas Age combining Natural Gas, Gas Record, Gas Age. $5 bi-w Moore Pub. Co, Inc, 48 W 38th St, New York 18

Geological Society of America Bulletin. $25 m Geological Society of America, H. R. Aldrich, sec, 419 W 117th St, New York 27

Geophysics. $10 bi-m Society of Exploration Geophysicists, Colin Campbell, Business Manager, Shell Bldg, Tulsa 19, Okla.

Glass Industry. $5 m The Ogden Group, Reuben H. Donnelley Corp, 466 Lexington Av, New York 17

Heating, Piping and Air Conditioning. $5 m Keeney Pub. Co, 6 N Michigan Av, Chicago 2

Hydraulics and Pneumatics. $7 m Industrial Pub. Corp, 812 Huron Rd, Cleveland 15

Hydrocarbon Processing and Petroleum Refiner. $3 m Gulf Pub. Co, P.O. Box 2608, Houston 1, Tex.
Formerly Petroleum Refiner; changed May, 1961

ISA Journal. $4 m Instrument Society of America, Penn-Sheraton Hotel, 530 William Penn Pl, Pittsburgh 19

Illuminating Engineering, the Journal of the Illuminating Engineering Society. $18 m Illuminating Engineering Society, 345 E 47th St, New York 17

Industrial and Engineering Chemistry. m American Chemical Society, 1155 16th St, N.W. Washington 6, D.C.

Industrial Chemist. 40s m Tothill Press, Ltd, 33 Tothill St, Westminster, London, S.W. 1

Industrial Finishing. $3 m Practical Publications, Inc, 1142 N. Meridian St, Indianapolis 4

Industrial Medicine and Surgery. $6 m Industrial Medicine Pub. Co, 400 S.W. 69th Av, Miami 44, Fla.

Industrial Photography. $6 m Photography in Business, Inc, 200 Madison Av, New York 16

Industrial Quality Control. $9 m American Society for Quality Control, Inc, 161 W Wisconsin Av, Milwaukee 3

Inland and American Printer and Lithographer. $5 m Maclean-Hunter Pub. Corp, 79 W Monroe St, Chicago 3
Name changed to Inland Printer/American Lithographer August, 1961

Inland Printer/American Lithographer. $5 m Maclean-Hunter Pub. Corp. 79 W Monroe St, Chicago 3
Formerly Inland and American Printer and Lithographer; changed August, 1961

Institute of Metals Journal. 180s m Institute of Metals, 17 Belgrave Square, London, S.W. 1

Institute of Petroleum Journal. £4 14s 6d m Institute of Petroleum, 61 New Cavendish St, London, W. 1

Institute of Radio Engineers Proceedings. $18 m Institute of Radio Engineers, Inc, 1 E 79th St, New York 21

Institution of Electrical Engineers Proceedings. The Institution, Savoy Place, London, W.C. 2
Published in 2 parts: pt A, Power Engineering, bi-m (F); pt B, Electronic and Communication Engineering (including Radio Engineering) bi-m (Ja)

Institution of Mechanical Engineers Proceedings. separate papers Institution of Mechanical Engineers, 1 Birdcage Walk, Westminster, London, S.W. 1

Instruments and Control Systems. $4 m Instruments Pub. Co, Inc, 845 Ridge Av, Pittsburgh 12

Iron Age. $25 w Chilton Co, Inc, Chestnut & 56th Sts, Philadelphia 39

Iron and Steel Engineer. $7.50 m Association of Iron and Steel Engineers, 1010 Empire Bldg, Pittsburgh 22

Iron and Steel Institute Journal. £12 m Iron and Steel Institute, 4 Grosvenor Gardens, London, S.W. 1

Journal of Agricultural and Food Chemistry. $20 bi-m American Chemical Society, 1155 16th St, N.W, Washington 6, D.C.

Journal of Applied Chemistry. £15 m Society of Chemical Industry, 14 Belgrave Square, London, S.W. 1

Journal of Applied Physics. $14 m American Institute of Physics, 335 E 45th St, New York 17
$12 to members and associate members of the American Institute of Physics

Journal of Colloid Science. $28 9 times a yr Academic Press Inc, 111 5th Av, New York 3

Journal of Geology. $10 bi-m University of Chicago Press, 5750 Ellis Av, Chicago 37

Journal of Mathematics and Physics. $8 q Massachusetts Institute of Technology, Cambridge 39, Mass.

Journal of Metals. $10 m American Institute of Mining, Metallurgical and Petroleum Engineers, Inc, 345 E 47th St, New York 17

Journal of Nutrition. $22.50 m Wistar Institute of Anatomy and Biology, 36th St at Spruce, Philadelphia 4

Journal of Petroleum Technology. $8 m Society of Petroleum Engineers of AIME, 6300 North Central Expressway, Dallas 6

Journal of Research of the National Bureau of Standards. Superintendent of Documents, Washington 25, D.C.
Published in 4 sections: A, Physics and Chemistry $4 bi-m; B, Mathematics and Mathematical Physics $2.25 q; C, Engineering and Instrumentation $2.25 q; D, Radio Propagation $4 bi-m

Journal of Scientific Instruments. £6; U.S. $17 m Institute of Physics and the Physical Society, 47 Belgrave Square, London, S.W. 1

Journal of the Aerospace Sciences. $20 m Institute of the Aeronautical Sciences, Inc, 2 E 64th St, New York 21

Light Metal Age. $4 bi-m Roy Fellom, Jr, 549 W Randolph St, Chicago 6

Lubrication Engineering. $6 m American Society of Lubrication Engineers, 5 N. Wabash Av, Chicago 2

Machine Design. $10 bi-w Penton Pub. Co, Penton Bldg, Cleveland 13

Machinery. $10 m Industrial Press, 93 Worth St, New York 13

Magazine of Standards. $7 m American Standards Association, Inc, 10 E 40th St, New York 16

Manufacturing Chemist. £2 10s m Hall Oak Press, Ltd, The Tower, Brook Green Road, Hammersmith, London, W.6

Marine Engineering/Log. $4 m (s-m in June) Simmons-Boardman Pub. Corp, 30 Church St, New York 7

Materials in Design Engineering. $3 m Reinhold Pub. Corp, 430 Park Av, New York 22
Extra number published in Mid-October

Materials Research and Standards. $5 m American Society for Testing Materials, 1916 Race St, Philadelphia 3
Formerly A S T M Bul; changed January, 1961

Mechanical Engineering. $7 m American Society of Mechanical Engineers, 345 E 47th St, New York 17

Metal Finishing. $5 m Metals and Plastics Publications, Inc, 381 Broadway, Westwood, N.J.

Metal Progress. $9 m American Society for Metals, Metals Park, Ohio

Metallurgia, the British Journal of Metals. 30s m Kennedy Press, Ltd, 31 King St, W, Manchester 3

Mill & Factory. m Conover-Mast Publications, Inc, 205 E 42d St, New York 17
Price on request

Mining Congress Journal. $3 m American Mining Congress, Ring Bldg, Washington 6, D.C.

Mining Engineering. $8 m American Institute of Mining, Metallurgical and Petroleum Engineers, Inc, 345 E 47th St, New York 17

Modern Materials Handling. $8 m Modern Materials Handling, 221 Columbus Av, Boston 16

Modern Metals. $10 m Modern Metals Pub. Co, 435 N. Michigan Av, Chicago 11

Modern Photography. $5 m Photography Pub. Corp, 33 W 60th St, New York 23

Modern Plastics. $8 m Modern Plastics, Inc, 770 Lexington Av, New York 21

Modern Textiles Magazine. $5 m Rayon Pub. Corp, 303 Fifth Av, New York 16
Extra number, First Annual Conference of AATT

Noise Control. $8 bi-m Noise Control, 335 E 45th St, New York 17

Nucleonics. $8 m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36

Oil and Gas Journal. $6 w Petroleum Pub. Co, 211 South Cheyenne Av, Tulsa 3, Okla.

Operations Research. $10 bi-m Operations Research Society of America, Mt Royal and Guildford Avs, Baltimore 2

Paint, Oil and Chemical Review. $3 bi-w Trade Review Co, 332 W Harrison St, Oak Park, Ill.
Ceased publication

Paper Industry. $3 m Fritz Publications, Inc, 431 S Dearborn St, Chicago 5

Petroleum Engineer for Management. $8 m Petroleum Engineer Pub. Co, 800 Davis Bldg, Dallas 2
Name changed to Petroleum Management August, 1961

Petroleum Management. $4 m (s-m Jl) Petroleum Engineer Pub. Co, 800 Davis Bldg, Dallas 2
Formerly Petroleum Engineer for Management; changed August, 1961

Petroleum Refiner. $3 m Gulf Pub. Co, P.O. Box 2608, Houston 1, Tex.
Name changed to Hydrocarbon Processing and Petroleum Refiner May, 1961

Physics Today. $4 m American Institute of Physics, 335 E 45th St, New York 17

Pit and Quarry. $3 m Pit and Quarry Publications, Inc, 431 S Dearborn St, Chicago 5

Plant Engineering. $10 m Technical Pub. Co, 308 E James St, Barrington, Ill.

Plant Management and Engineering. $6 m Hitchcock Pub. Co, Wheaton, Ill.

Plastics Technology, the Magazine of Applied Engineering. $7 m Bill Brothers Pub. Corp, 630 Third Av, New York 17

Plastics World. $8 m Cleworth Pub. Co, Inc, 1 River Road, Cos Cob, Conn.

Plating. $5 m American Electroplaters' Society, Inc, 443-445 Broad St, Newark 2, N.J.

Power. $3 m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36

Power Apparatus and Systems. $8 bi-m American Institute of Electrical Engineers, 345 E 47th St, New York 17

Power Engineering. $10 m Power Engineering, 308 E James St, Barrington, Ill.

Product Engineering. $3 bi-w McGraw-Hill Pub. Co. Inc, 330 W 42d St, New York 36

Progressive Architecture. $5 m Reinhold Pub. Corp, 430 Park Av, New York 22

Public Roads. $1 bi-m Superintendent of Documents, Washington 25, D.C.

Public Works. $5 m Public Works Journal Corp, 200 S Broad St, Ridgewood, N.J.

QST. $5 m American Radio Relay League, Inc, 38 La Salle Rd, West Hartford 7, Conn.

RCA Review. $2 q Radio Corporation of America, RCA Laboratories Division, Princeton, N.J.

Radio-Electronics. $5 m Gernsback Publications, Inc, 154 W 14th St, New York 11

Research, Applied in Industry. 65s; U.S. $10.75 m Butterworths Publications, Ltd, 88 Kingsway, London, W.C. 2

Research/Development. m F. D. Thompson Publications, Inc, 201 N. Wells St, Chicago 6

Review of Scientific Instruments. $11 m American Institute of Physics, 335 E 45th St, New York 17
$9 to members of scientific societies

Roads and Streets. $6 m Gillette Pub. Co, 22 West Maple St, Chicago 10

Rock Products. $3 m Maclean-Hunter Pub. Corp, 79 W Monroe St, Chicago 3

Royal Aeronautical Society Journal. £7 10s m Royal Aeronautical Society, 4 Hamilton Place, London, W. 1

Rubber Age. $5 m Palmerton Pub. Co, Inc, 101 W 31st St, New York 1

Rubber Chemistry and Technology. $9.50 5 times a yr American Chemical Society, Division of Rubber Chemistry, Prince and Lemon Sts, Lancaster, Pa.

Rubber World. $5 m Bill Brothers Pub. Corp, 630 3d Av, New York 17

SAE Journal. $12 m Society of Automotive Engineers, Inc, 485 Lexington Av, New York 17

Safety Maintenance. $4 m Alfred M. Best Co, Inc, 75 Fulton St, New York 38

Scientific American. $6 m Scientific American, Inc, 415 Madison Av, New York 17

Soap and Chemical Specialties. $4 m MacNair-Dorland Co, Inc, 254 W 31st St, New York 1

Society of Dyers and Colourists Journal. £7 m Society of Dyers and Colourists, Dean House, 19 Piccadilly, Bradford 1, Yorkshire, England

Society of Motion Picture and Television Engineers Journal. $12.50 m Society of Motion Picture and Television Engineers, 55 W 42d St, New York 36

Space/Aeronautics. $15 m Conover-Mast Publications, Inc, 205 E 42d St, New York 17
Extra number, Research and Development Handbook, 1961-1962

Steel. $10 w Penton Pub. Co, Penton Bldg, Cleveland 13

Tappi. $10 m Technical Association of the Pulp and Paper Industry, 360 Lexington Av, New York 17

Textile Industries. $2 m W. R. C. Smith Pub. Co, 1760 Peachtree Rd, N.W, Atlanta 9
Extra number published in Mid-September

Textile Research Journal. $25 m Textile Research Institute, Inc, Publications Department, P.O. Box 625, Princeton, N.J.

Textile World. $2 m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36
Extra number published in Mid-July

Tool and Manufacturing Engineer. $6 m (s-m in Mr) American Society of Tool Engineers, 10700 Puritan Av, Detroit 38

Traffic Quarterly. q Eno Foundation for Highway Traffic Control, Inc, Saugatuck, Conn.
Price on request

Water & Sewage Works. $5 m Scranton Pub. Co, Inc, 185 N Wabash Av, Chicago 1
Two numbers published in October, included in annual subscription

Water Pollution Control Federation Journal. $10 m Water Pollution Control Federation, 4435 Wisconsin Av, N.W, Washington 16, D.C.

Water Works Engineering. $4 m Water Works Engineering, 466 Lexington Av, New York 17

Welding Engineer. $3 m Welding Engineer Publications, Inc, P.O. Box 28, Morton Grove, Ill.
Extra number published in Mid-June

Welding Journal. $8 m American Welding Society, 345 E 47th St, New York 17

Westinghouse Engineer. $2.50 bi-m Westinghouse Engineer, P.O. Box 2278, 3 Gateway Center, Pittsburgh 30

Wire and Wire Products. $8 m Quinn-Brown Pub. Corp, 299 Main St, Stamford, Conn.

Wireless World. £2; U.S. $5.50; Canada $5.50 m Iliffe Electrical Publications, Ltd, Dorset House, Stamford St, London, S.E. 1

Key to General Abbreviations

+	continued on later pages of the issue
abr	abridged
Ag	August
Ap	April
arch	architect
bibliog	bibliography
comp	compiled or compiler
cond	condensed
cont	continued
D	December
diag	diagram
ed	edited or edition or editor
F	February
il	illustrations
inc	incorporated
Ja	January
Je	June
Jl	July
Mr	March
My	May
N	November
n s	new series
no	number
O	October
p	page
pl	plate
por	portrait
pseud	pseudonym
pt	part
rev	revised
S	September
sup	supplement
tr	translated or translation or translator
v	volume
yrbk	yearbook

Sample entry: TRANSFER mechanisms
Increased integration of transfer saves floor space. L. W. Collins, jr. il diag Mach 67: 108-15+ Ja '61

Explanation: An illustrated article with diagram, on the subject TRANSFER mechanisms entitled "Increased integration of transfer saves floor space," by L. W. Collins, jr., will be found in volume 67 of Machinery, page 108-15 (continued on later pages of the same issue) the January 1961 number.

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ABS (alkyl benzenesulfonate). See Benzenesulfonates

ACTH

Adrenocorticotropin (ACTH); a sedimentation study of the state of aggregation of ovine pituitary ACTH in acidic and basic solutions. P. G. Squire and C. H. Li. bibliog Am Chem Soc J 83:3521-8 Ag 20 '61

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Studies on polypeptides; the synthesis of a partially protected tridecapeptide amide corresponding to positions 11 to 23 in the corticotropin sequence. K. Hofmann and others. bibliog Am Chem Soc J 83:2294-9 My 20 '61

Synthetic ACTH. Manuf Chem 32:174-5 Ap '61

Synthetic ACTH duplicates natural hormone's properties. K. Hofmann. il Chem & Eng N 38:46-8+ D 12 '60

ADS. See Association of Diesel specialists

ANC (all-number calling). See Telephone, Automatic

ABBOTT laboratories

Organizing and using a maintenance training program; how Abbott laboratories does it. J. W. Rantala. diag Plant Eng 15:125-30 Ja '61

ABBREVIATIONS

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Symbols

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Stereospecific route to the dehydroabietic acid configuration. M. E. Kuehne. bibliog Am Chem Soc J 83:1492-8 Mr 20 '61

Synthesis of abietic acid from dehydroabietic acid. A. W. Burgstahler and L. R. Worden. bibliog Am Chem Soc J 83:2587-8 Je 5 '61

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Creative ability

ABILITY tests

Psychological testing can help in spotting future engineer executives. G. Buckner, 2d. Power 104:229-31 D '60

Psychological tests; tool or trap? Elec World 155:81-4 F 6 '61

Selection of employees in industry. D. J. Moffie. il Archives Environmental Health 3:94-9 Jl '61

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Abrasion testing on a modified DuPont-Grasselli abrader. Z. Rigbi. bibliog diags Rubber Age 89:632-5 Jl '61

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Cotton quality study; resistance to abrasion. J. P. McNally and F. A. McCord. il diags Textile Res J 30:715-51 bibliog(p745-51) O '60

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Studies of abrasive wear resistance. diags Engineering 191:546-7 Ap 14 '61

Testing protective coatings on metals; scrape-abrasion apparatus. P. Smits. il diag Metal Prog 80:75-9 S '61

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Abrasive belt grinding line saves nearly ⅔ of previous costs. il Mill & Factory 67:140 N '60

Abrasive machining of stainless steel. il diag Mech Eng 83:50 Ja '61

Belt grinding assures precision gage of strip. il diag Tool & Manuf Eng 45:79-80 D '60

Belt grinding betters stainless tolerances. il diags Iron & Steel Eng 37:159-60 N '60

Belt machines hold honeycomb tolerances. il Steel 149:88-9 Jl 24 '61

Expect to standardize belt lengths. Automation 8:10 Je '61

Laminate finishing; change from manual sanding to wet belt grinding. il Plastics World 18:28 D '60

Mattison abrasive-belt grinder with three-roll head. il Mach 67:210 D '60

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Three teams join in developing process for making ultra-precision stainless strip; new abrasive belt grinding line. C. A. Weinert. il diags Automotive Ind 123:60+ N 1 '60

Versatile low-cost belt grinder. il Mach 67:194 D '60

Wet-belt grinding combines accuracy, speed. O. M. De Michele. il Tool & Manuf Eng 46:111-12 F '61

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Abrasive blast cleaning. D. E. Neustadt. il Metal Finishing 59:60-2 S '61

Abrasive dust no problem for high accuracy scales. il Steel 149:61 Jl 31 '61

Abrasive making gets a streamlined look: Cleveland metal abrasives co. il diag Steel 148:128-9 F 13 '61

Evaluating resistance of abrasive grits to comminution. D. E. Cadwell and E. J. Duwell. il Am Cer Soc Bul 39:663-7 N 15 '60

Grind away cutting costs. L. P. Tarasov and R. H. Merritt. il Am Mach/Metalworking Manuf 105:58-9 My 29 '61

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Investigation of abrasive-laden-fluid method for perforation and fracture initiation. F. C. Pittman and others. il diags J Pet Tech 13:Trans 489-95 My '61

Not heading for a fall. il Safety Maint 120:12-13+ N '60

See also

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Metal finishing
Polishing
Polishing materials
Pumice

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Control of absenteeism; role of the medical department. V. A. Wilson. bibliog Archives Environmental Health 3:57-62 Jl '61

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Sickness

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Improvement of lightfastness of dyeings on synthetic fibers by ultraviolet absorbers. A. F. Strobel. bibliog Am Dyestuff Rep 50:583-8 Ag 7 '61

New absorbents cut H_2S removal cost. diag Chem Eng 67:44+ D 26 '60

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Sound—Absorption

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Spectrophotometry

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ABSORPTION spectra. See Spectrum—Absorption spectra

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If you write technical reports polish your title and abstract. J. D. Stevens. Rubber Age 89:988 S '61

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Apparatus drawings project; acceleration carts and track. R. G. Marcley. il diag Am J Phys 29:294-7 My '61

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Air conditioning from central stations
Cooling
Cooling from central stations
Dehumidification
Electricity in air conditioning
Exhaust systems
Gas in air conditioning
Ventilation

also subdivision Air conditioning under special subjects, e.g.

Airplane shops
Airplanes
Airport buildings
Apartment houses
Architects offices
Atomic research laboratories
Ballrooms
Bank buildings
Biological laboratories
Churches
College libraries
Cotton mills
Courthouses
Data processing service centers
Electric laboratories
Exhibition buildings
Factories
Greenhouses
Hospitals
Hotels
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Ships
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Copper alloys
Germanium alloys
Gold alloys
Indium alloys
Iron alloys
Lead alloys
Magnesium alloys
Manganese alloys
Molybdenum alloys
Monel metal
Nickel alloys
Niobium alloys
Palladium alloys
Permalloy
Platinum alloys
Plutonium alloys
Rhenium alloys
Rhodium alloys
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Developments at Alcan's Rogerstone plant; 144 in. wide hot mill is main feature. il Metallurgia 62:201-6 N; 251-6 D '60

Expansion of Rogerstone aluminium strip mill; Alcan industries, ltd. il Engineer 210:635-8, 661-4 O 14-21 '60

Reynolds aluminum offers wider sheet and plate; mass produced on a new hot line. il Steel 148:92 Ja 30 '61

Temperature controlled aluminum soaking pits. il Engineering 190:773 D 2 '60

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For growth-minded small firms; a new type of long-term loan. L. L. Kohn. Mod Metals 17:42+ Mr '61

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Development of the alum-amine process for the recovery of alumina from shale. G. Thomas and T. R. Ingraham. bibliog flow sheet Can J Chem Eng 38:220-2 D '60

See also
Aluminum sulfate

ALUMS, Liquid

Better floc at lower cost by converting to liquid alum at Cambridge filtration plant. W. A. McGinness. il diag Water Works Eng 114:408-9+ My '61

Inside view of a modern, complete alum plant; Dixon chemical & research, inc; process flowsheet. E. K. Sheldon. il Chem Eng 68:132-5 Mr 20 '61

Liquid alum goes continuous. Chem Eng 67:116 N 14 '60

Liquid alum tank linings. T. B. Corlett, jr. and C. M. Bach. il Water & Sewage Works 108:280-2 Jl '61

AMALGAMS

Crystal structure of potarite (PdHg) with some comments on allopalladium. K. Terada and F. W. Cagle, jr. bibliog Am Mineralogist 45:1093-7 S '60

See also
Sodium amalgam

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Alkaloids of the amaryllidaceae krigenamine; a new alkaloid from nerine krigeii. P. W. Jeffs and F. L. Warren. bibliog Chem & Ind p468-9 Ap 15 '61

AMATEUR moving pictures. See Moving pictures, Amateur

AMATEUR radio emergency corps

Simulated emergency test, 1960; the Amateur radio emergency corps in action. G. Hart. il Q S T 45:58-62 Ap '61

AMATEUR radio operators. See Radio operators, Amateur

AMBER glass. See Glass, Colored

AMBULANCES

From cars to glass-polyester coaches. il Plastics World 18:17 D '60

AMBULANCES, Marine

First aid afloat; ambulance cruiser. W. Gutowski. il Safety Maint 121:43-4 F '61

AMEBA

Pinocytosis. R. C. Rustad. il Sci Am 204:120-6+ Ap '61

Viruses, amebas, and nematodes and public water supplies. S. L. Chang. bibliog Am Water Works Assn J 53:288-96 Mr '61

AMERICAN association for textile technology

Annual conference, 1st; text of panel discussions. Mod Textiles Mag 42:Special ed 5-7+ '61

AMERICAN association for the advancement of science

Annual meeting, New York. Product Eng 32:15 Ja 16 '61

AMERICAN association of petroleum geologists
Annual meeting, 46th, Denver, April 24-27; reports. Am Assn Pet Geologists Bul 45: 1249-300 Jl '61
Membership directory. Am Assn Pet Geologists Bul 45:1-228 pt 2 Mr '61
Pacific section meeting, Los Angeles. Oil & Gas J 58:109 N 14 '60
Pacific section meeting, Los Angeles, Nov. 3-4; abstracts of papers. Am Assn Pet Geologists Bul 45:127-34 Ja '61
Southwestern regional meeting, Abilene, Tex. Oct. 12-14; abstracts of papers. Am Assn Pet Geologists Bul 45:123-6 Ja '61

AMERICAN association of physics teachers
Annual joint meeting with the American physical society, New York. Phys Today 14:52+ Mr '61
Annual meeting of the council, New York, Feb. 2. Am J Phys 29:466-8 Jl '61
Annual meeting, 30th, New York, Feb. 1-4; with abstracts of papers. Am J Phys 29:565-75 Ag '61
Citations for distinguished service. L. O. Olsen. Am J Phys 29:476-7 Ag '61
Regional sections of the association; editorial. F. Verbrugge. Am J Phys 28:777 D '60
Revision of the constitution and by-laws. Am J Phys 29:658-60 S '61
Summer meeting, Oberlin, June 23-25; with abstracts of papers. Am J Phys 29:132-6 F '61
Your AAPT in 1961; editorial. M. Correll. Am J Phys 29:70-1 F '61

AMERICAN association of state highway officials
Annual convention, 46th, Detroit, Nov. 28-Dec. 2. Eng N 165:21-2 D 8 '60; Roads & Sts 104:91-3 Ja '61
Annual meeting, 47th, Denver. Eng N 167: 25-7 O 19 '61
Regional conference on improved highway engineering productivity, Boston. Eng N 167: 22 Ag 31 '61

AMERICAN association of textile chemists and colorists
Aims and objectives. E. Morrill. Am Dyestuff Rep 50:108-11 F 6 '61
AATCC makes a wrong move; moving national headquarters to New York city. Textile Ind 125:27+ S '61
Annual convention, Philadelphia; abstracts of papers. Textile Ind 124:77-9 D '60; Textile World 110:84-6+ D '60
Annual meeting, Buffalo, Sept. 27-29; program, officers, committee members; with list of exhibitors, floor plan; abstracts of papers. Am Dyestuff Rep 50:711-49 S 18 '61
Council highlights; 220th meeting, Atlanta, Ga. Sept. 9. Am Dyestuff Rep 49:858 N 14 '60
Council report; 221st meeting, New York. Am Dyestuff Rep 50:28-9 Ja 9 '61
Council report; 222d meeting, New York, Jan. 20. Am Dyestuff Rep 50:259-61 Ap 3 '61
Council report; 223d meeting Durham, N.C. April 21. Am Dyestuff Rep 50:645-50 Ag 21 '61
Morrill elected AATCC's 16th president. Am Dyestuff Rep 49:972-3 D 12 '60
National convention, Philadelphia; abstracts of papers. Mod Textiles Mag 41:46+ N; 37-9 D '60; 42:24+ Ja '61
National meeting, 39th, Philadelphia. Am Dyestuff Rep 49:859-63 N 14 '60
1960 awards luncheon, Philadelphia, Oct. 6th. Am Dyestuff Rep 49:1002-5 D 26 '60
Report of the study committee on the intersectional contest. Am Dyestuff Rep 50:262-3 Ap 3 '61
Sections and the national association. G. P. Paine. Am Dyestuff Rep 50:221-4 Mr 20 '61
Textile consumer looks to AATCC. E. Morrill. Am Dyestuff Rep 50:209-10+ Mr 20 '61

Committee on research

Meeting, 203d, New York, Nov. 18. Am Dyestuff Rep 50:142-5 F 20 '61
Meeting, 204th, New York, Jan. 19; with text of reports. Am Dyestuff Rep 50:254-8+ Ap 3 '61

AMERICAN astronautical society
Annual meeting, Jan. 16-18. Control Eng 8: 36+ Mr '61

AMERICAN can company
Computer speeds container r&d; American Can's research lab. G. B. Pratt. il diag Food Eng 32:93-4 N '60

AMERICAN ceramic society
Annual meeting, 63d, Toronto, April 22-27; with program and abstracts of papers. Am Cer Soc Bul 40:175-7+ Ap 15 '61
Audit report, 1960. Am Cer Soc Bul 40:521 Ag 15 '61
Membership roster. Am Cer Soc Bul 40:552-87+ O 15 '61
Pacific Coast regional meeting, 14th, San Francisco, Oct. 25-28; program. Am Cer Soc Bul 40:533+ Ag 15 '61

Basic science division

Annual meeting, Toronto, April 24-26; program and abstracts of papers. Am Cer Soc Bul 40:187+ Ap 15 '61
Fall meeting, Detroit, Sept. 25-27; abstracts of papers. Am Cer Soc Bul 39:750-1 D 15 '60
Fall meeting, Schenectady, Oct. 8-10; program and abstracts of papers. Am Cer Soc Bul 40:579-82 S 15 '61

Design division

Annual meeting, Toronto, April 24-27; program and abstracts of papers. Am Cer Soc Bul 40:205+ Ap 15 '61
Design division and its place in the American ceramic society. J. S. Nordyke. Am Cer Soc Bul 40:392-3 Je 15 '61

Electronics division

Annual meeting, Toronto, April 24-26; program and abstracts of papers. Am Cer Soc Bul 40:209+ Ap 15 '61
Electronics division and 14th Pacific Coast regional meeting, San Francisco, Oct. 25-28; program. Cer Ind 77:80-3+ O '61
Electronics division and 14th Pacific Coast regional meetings, San Francisco, Oct. 25-28; program and abstracts of papers. Am Cer Soc Bul 40:583-9 S 15 '61

Enamel division

Annual meeting, Toronto, April 24-26; program and abstracts of papers. Am Cer Soc Bul 40:217+ Ap 15 '61
Fall meeting, French Lick, Ind. Sept. 20-23; program and abstracts of papers. Am Cer Soc Bul 40:528-31 Ag 15 '61

Glass division

Annual meeting, Toronto, April 24-26; program and abstracts of papers. Am Cer Soc Bul 40:225+ Ap 15 '61; Glass Ind 42: 381-4+, 445-8+ Jl-Ag '61
Fall meeting, Bedford Pa. Oct. 12-14; abstracts of papers. Glass Ind 41:679-83+; 42:31+ D '60-Ja '61
Fall meeting, Bedford, Pa. Oct. 11-13; program and abstracts of papers. Am Cer Soc Bul 40:595+ S 15 '61

Materials and equipment division

Annual meeting, Toronto, April 24-26; program and abstracts of papers. Am Cer Soc Bul 40:239+ Ap 15 '61

Refractories division

Annual meeting, Toronto, April 24-26; program and abstracts of papers. Am Cer Soc Bul 40:245+ Ap 15 '61
Fall meeting, Bedford, Pa. Oct. 5-7; program and abstracts of papers. Am Cer Soc Bul 40:590-1 S 15 '61

Structural clay products division

Annual meeting, Toronto, April 24-26; program and abstracts of papers. Am Cer Soc Bul 40:255+ Ap 15 '61

Whiteware division

Annual meeting, Toronto, April 24-26; program and abstracts of papers. Am Cer Soc Bul 40:261+ Ap 15 '61

AMERICAN chemical society
Amendment of constitution and bylaws. Chem & Eng N 39:81-4+ Ag 14 '61
ACS award winners named. Chem & Eng N 39:36-7 S 11 '61
ACS names advisory board members. Chem & Eng N 38:81-5 D 26 '60; 39:71-2+ F 13 '61
ACS sections honor students, teachers. Chem & Eng N 39:80+ Je 12 '61
ACS to honor 91 for 50-year membership. Chem & Eng N 39:92+ Mr 20 '61
Annual report, 1960. il Chem & Eng N 39:57-80 Mr 6 '61
Arthur C. Cope, ACS president for 1961. Chem & Eng N 39:72+ Ja 2 '61
Board of directors minutes, Dec. 2-4, and reports of committees. Chem & Eng N 39: 80-92 Ja 16 '61
Board of directors minutes, June 9. Chem & Eng N 39:82-5 Jl 17 '61

AMERICAN chemical society—*Continued*

Board of directors minutes, council meetings and reports of board and council committees. Chem & Eng N 39:76-88 O 23 '61

Council approves new meeting plan. Chem & Eng N 39:27 Ap 3 '61

Five new members appointed to Analytical Chemistry's advisory board. Anal Chem 33:sup39A-40A Ja '61

Folkers is ACS president-elect for 1961; ACS divisions elect officers. Chem & Eng N 38:82, 85+ D 12 '60

National meeting, 139th, St Louis, March 21-30; program. Chem & Eng N 39:84-126 F 13 '61

National meeting, 140th, Chicago, Sept. 3-8; final program, list of exhibitors, plans. Chem & Eng N 39:60-118 Jl 31 '61

Officers, directors, councilors, and committees. Chem & Eng N 39:75-9+ F 27 '61

Officers of local sections and divisions. Chem & Eng N 39:99-102+ Mr 27 '61

Official reports from the 139th national meeting. Chem & Eng N 39:72-95 My 15 '61

Progress report number 34 of the committee on professional training. Chem & Eng N 39:84-9 Mr 20 '61

Projected divisional programs. Chem & Eng N 39:70-4+ Jl 24 '61

Southwest regional meeting, Oklahoma City, Okla; program. Chem & Eng N 38:82-4+ N 14 '60

Chemical abstracts service

Career opportunities for chemists and chemical engineers. il Chem & Eng N 39:65 pt 2 Ja 30 '61

Division of analytical chemistry

ACS meeting, Chicago, Sept. 3-8; program. Anal Chem 33:sup35A-6A+ Ag '61

National meeting, 139th, St Louis, March 27-30; program. Anal Chem 33:sup52A-8A Mr '61

Division of rubber chemistry

Fall meeting, Chicago, Sept. 6-8; program and abstracts of papers. Rubber World 144:85-8+ Jl '61

Meeting, 78th, New York, Sept. 13-16. Rubber Chem & Tech 33:sup x-xx D '60

Meeting, 79th, Louisville, Ky. April 19-21; with program and abstracts of papers. Rubber Age 88:981-5; 89:296-8+ Mr, My '61; Rubber World 144:83-91 My '61

Meeting, 80th, Chicago, Sept. 6-8; program and abstracts of papers. Rubber Age 89:801-7 Ag '61

Officers; committees; sponsored rubber groups. Rubber Chem & Tech 33:sup iii-ix D '60

AMERICAN commission on stratigraphic nomenclature

Geochronologic and chronostratigraphic units. Am Assn Pet Geologists Bul 45:666-70 My '61

Records of the stratigraphic commission for 1959-1960. Am Assn Pet Geologists Bul 45:670-3 My '61

AMERICAN concrete institute

Annual meeting, 57th, St Louis, Feb. 20-23. Civil Eng 31:90 Ap '61; Pit & Quarry 53:140-1 Ap '61; Eng N 166:21 Mr 2 '61

Annual meeting, 57th, St Louis, Feb. 22-23; program. Am Concrete Inst J 32:sup 18-21 Ja '61

Annual meeting, 57th, St Louis, Feb. 20-23; with abstracts of papers and list of exhibitors. Am Concrete Inst J 32:sup3-9+ My '61

Annual report, 1960. Am Concrete Inst J 32:sup 1-4+ Mr '61

Institute goals updated. Am Concrete Inst J 32:sup3 Je '61

Regional meeting, 14th, Birmingham, Ala. Nov. 1-3; program. Am Concrete Inst J 58:sup3+ O '61

Universal material, cosmopolitan society. J. W. Kelly. Am Concrete Inst J 32:1409-16 My '61

AMERICAN cotton manufacturers institute

Annual meeting, Miami, March 23-25. Mod Textiles Mag 42:22+ My '61

AMERICAN electroplaters society

Annual meeting, 48th, Boston, June 18-22; with program and abstracts of papers. Metal Finishing 59:66-74 Je; 44-8 Ag '61; Plating 48:670-81, 887-97 Je, Ag '61

Annual report. Plating 48:643-56 Je '61

Branch directory (as at April 1, 1961). Plating 48:661-5 Je '61

Financial report, fiscal period, July 1, 1960-June 30, 1961. Plating 48:1021-4 S '61

AMERICAN foundrymens society

AFS awards. Foundry 89:162-3 My '61

Castings congress, 65th, San Francisco, May 8-12; with program and abstracts of papers. Foundry 89:152-61 My; 66-71, 142-4+ Je; 149+ Jl '61

AMERICAN gas association

A.G.A. nominates for 1961-1962. Am Gas Assn Mo 43:2-4+ Jl-Ag '61

AGA to study long-range supply and demand. Oil & Gas J 59:115 Jl 31 '61

Annual convention, 42d, Atlantic City, Oct. 9-12. Gas Age 126:23-5+ N 10 '60; Am Gas Assn Mo 42:2-6+ N '60

Gas hails new gas requirements and supply group; new AGA committee. J. F. Ebdon. Gas 37:58-60 S '61

General management conference, Charleston, S.C. March 20-22. Am Gas Assn Mo 43:10-11+ Ap '61

General management section annual meeting, 7th, Charleston, S.C. March 20-22. Am Gas Assn Mo 43:20-2 Ja '61

General management section committees reorganized. Am Gas Assn Mo 42:25-6+ D '60

General session of the 1960 convention, Atlantic City. ASHRAE J 2:60 N '60

Operating men look to the future; combined distribution and production conference, Philadelphia, May 8-12. Am Gas Assn Mo 43:2-6+ Je '61

Operating section transmission conference, Denver, May 25-26. Am Gas Assn Mo 43:30-3 Jl-Ag '61

Research and utilization conference, Cleveland, April 4-6; abstracts of papers. Gas 37:77-80 Je '61

Sales conference on industrial and commercial gas, Windsor, Ontario. Am Gas Assn Mo 43:24-6 Je '61

Your investment in A.G.A. C. S. Stackpole. Am Gas Assn Mo 43:10-12+ Jl-Ag '61

AMERICAN gear manufacturers association

Fall meeting, Chicago, Oct. 23-26. Am Mach/Metalworking Manuf 104:119 N 14 '60

AMERICAN industrial hygiene association

Annual conference, 23d, Detroit, April 9-13. Ind Med 30:206-7 My '61

AMERICAN institute of architects

Annual convention, Philadelphia. Arch Forum 114:7 Je '61; Arch Rec 129:10+ Je '61

Convention, Philadelphia. Eng N 166:20-1 My 4 '61

AMERICAN institute of chemical engineers

Annual meeting, New York, Dec. 3-7; program. Chem Eng Prog 57:96-8+ S '61

Joint meeting with Chemical institute of Canada's Chemical engineering division, Cleveland, May 7-10; program. Chem Eng Prog 57:123-4+ Mr '61

National meeting, New Orleans, February 26-March 1; program. Chem Eng Prog 57:104-11 Ja '61

National A.I.Ch.E. meeting, Lake Placid, N.Y. Sept. 24-27 program. Chem Eng Prog 57:120+ Jl '61

Why I belong to the A.I.Ch E. Chem Eng Prog 57:85-8 Ja '61

AMERICAN institute of cooperation

Annual meeting, Minneapolis, Aug. 20-23. Elec World 156:76 S 4 '61

AMERICAN institute of electrical engineers

AIEE and appliance engineering; for what and for whom? M. A. Fuller. Elec Eng 80:401-3 Je '61

AIEE fellows elected (cont). Elec Eng 79:936-9, 1071; 80:382-7, 643-7, 720-3 N-D '60, My, Ag-S '61

AIEE officers, departments, and committees for 1961-62. Elec Eng 80:713-16 S '61

AIEE section and student branch meetings 1959-1960; list. Elec Eng 79:942-5 N '60

AIEE status; interview with W. H. Chase. Elec World 156:40-1 Ag 28 '61

AIEE today; highlights of the year. Elec Eng 80:605-18 Ag '61

Board of directors reports on current business and long-range policy. Elec Eng 80:295-6 Ap '61

Fall general meeting, Chicago, Oct. 9-14; with abstracts of papers. Elec Eng 79:1055-8 D '60; Power Eng 64:63-5 D '60

Great Lakes district meeting, Minneapolis, April 19-21; program. Elec Eng 80:287-90 Ap '61

Nominees sought for five awards. il Elec Eng 79:930-1 N '60

Nominees to hold offices in 1961-62. Elec Eng 80:297-300 Ap '61

North eastern district meeting, Hartford, May 17-19; program. Elec Eng 80:282-4+ Ap '61

AMERICAN institute of electrical engineers —*Continued*
Pacific general meeting, 50th, Salt Lake City, Aug. 23-25; program. Elec Eng 80:619-21 Ag '61
Pacific general meeting, Salt Lake City. Elec World 156:41+ S 25 '61
Power industry computer application conference, St Louis. Elec World 154:49+ D 26 '60
President's comments. C. H. Linder. Elec Eng 80:212-13 Mr '61
Summer general meeting, Ithaca, June 18-23; program. Elec Eng 80:451-4 Je '61
Summer meeting, Ithaca, New York; abstracts of papers. Elec World 156:40-3+ Jl 17 '61
Winter general meeting, New York, Jan. 29-Feb. 3. Power Eng 65:76 Mr '61
Winter general meeting, New York, Jan. 29-Feb. 3; program and abstracts of papers. Elec Eng 80:73-81, 292-5 Ja, Ap '61
Winter general meeting, New York; with abstracts of papers. Elec World 155:36-7 F 6; 30-8+ Mr 6 '61

AMERICAN institute of mining, metallurgical and petroleum engineers
Annual meeting, 90th, St Louis, February 26-March 2; with abstracts of papers. Pit & Quarry 53:88-91+ My '61; J Metals 13:434-8 Je '61
Regional meeting on 50th anniversary of froth flotation in U.S.A., Denver, Sept. 17-20. Eng & Min J 162:18-19+ O '61
Report of the AIME committee on inter-engineering society cooperation. J Metals 13:162-4 F '61
Ronald R. McNaughton, 1961 AIME president. J Pet Tech 13:114 F '61
State of the Institute; presidential address. J. L. Gillson. il Min Eng 13:361-4 Ap '61; Same cond. J Pet Tech 13:433-6 My '61; Same cond. J Metals 13:439-41 Je '61

Metallurgical society
Annual meeting, St Louis, February 26-March 2; program and abstracts of papers. J Metals 13:65-88 Ja '61
Annual report of the secretary, 1960. R. W. Sherman. J Metals 13:321-3 Ap '61
Fall meeting, Philadelphia, Oct. 17-20. J Metals 13:153-5 F '61
Fall meeting, Detroit, Oct. 22-26; program and abstracts of papers. J Metals 13:653-94 S '61

Society of mining engineers
Annual meeting, St Louis, February 26-March 3; abstracts of papers on coal mining and preparation. Coal Age 66:100-2+ Ap '61
Annual meeting, St Louis, February 26-March 2; program and abstracts of papers. Min Eng 12:1239-49 D '60
From the secretary's desk; report for 1960. Min Eng 13:602-3 Je '61
Income statement for the year 1960. Min Eng 13:600 Je '61
Joint meeting, Industrial minerals divisions, with Canadian institute of mining and metallurgy, Ottawa, Oct. 1-3; program. Can Min & Met Bul 54:sup 17-19 Ag '61
1961 membership directory. Min Eng 13:719+ Jl '61
1961 SME president. Min Eng 13:599 Je '61
SME officers, directors, and how SME operates. Min Eng 13:604-6 Je '61
What is SME? Min Eng 13:599 Je '61

Society of petroleum engineers
Annual fall meeting, 36th, Dallas, Oct. 8-11; program. J Pet Tech 13:557-60 Je '61
Earl M. Kipp, 1961 president Society of petroleum engineers. J Pet Tech 13:113 F '61
Fall meeting, Dallas, Oct. 8-11; program and abstracts of papers. J Pet Tech 13:875-91 S '61

AMERICAN institute of nutrition
Annual meeting, 24th, Chicago, April 11-15; proceedings. J Nutrition 72:473-80 D '60
Annual meeting, 25th, Atlantic City, N.J. April 10-14; proceedings. J Nutrition 75:132-42 S '61

AMERICAN institute of physics
Annual assembly of society officers and meeting of corporate associates, Harriman. Phys Today 13:36-7 D '60
Annual report, 1960. Phys Today 14:20-7 My '61
Corporate associates. Phys Today 14:29 Mr '61

AMERICAN institute of plant engineers
Annual meeting, Chicago, Jan. 22; activities. Plant Eng 15:148-9 Mr '61
Plant engineers' activities. Plant Eng 15:138+ F; 132 Je '61
Western chapters regional meeting, Anaheim Calif. Plant Eng 15:144-5 Mr '61

AMERICAN iron and steel institute
General meeting, 69th, New York. Iron Age 187:35-6 Je 1 '61

AMERICAN machine and foundry company
AMF story; research reactors + specialized machinery = success. Nucleonics 18:28-9 D '60

AMERICAN medical association
AMA and the industry. M. Moskowitz. Drug & Cosmetic Ind 89:290-1+ S '61
AMA opposes Kefauver's drug control plan; abstract. H. H. Hussey, jr. Chem & Eng N 39:41 Jl 17 '61

AMERICAN mining congress
Annual business meeting, 61st, New York, Dec. 5. Min Cong J 47:32-3+ Ja '61
Annual meeting, Seattle, Sept. 10-14. Min Eng 13:1142-3 O '61
Coal division annual conference, Pittsburgh, Nov. 17-18; wih abstracts of committee reports. Min Cong J 47:58-61 Ja '61
Coal division meeting and coal show, Cleveland, May 15-18; program, equipment preview, and abstracts of papers. Coal Age 66:110-36+ Ap; 108-17 Je '61
Coal division meeting and coal show, Cleveland, May 15-18; with program, list of exhibitors and abstracts of papers. Min Cong J 47:72-6 Mr; 50-69 Ap; 25-7, 73-84 Je '61
Declaration of policy, adopted at Las Vegas, Nev. Oct. 10-13. Min Cong J 46:31-7 N '60
Metal mining and industrial minerals convention and exposition, Las Vegas, Oct. 10-13. Eng & Min J 161:24-5+ N '60; Min Eng 12:1179-81 N '60; Pit & Quarry 53:84-7 D '60; Rock Prod 63:114+ D '60
Metal mining and industrial minerals convention and exposition, Las Vegas, Oct. 10-13; with abstracts of papers. Min Cong J 46:68-83 N '60
Metal mining-industrial minerals convention, Seattle; abstracts of papers. Eng & Min J 162:126+ O '61
Metal mining-industrial minerals convention, Seattle, Sept. 10-13; with program, declaration of policy and abstracts of papers. Min Cong J 47:33-46 Ag; 27-33, 58-75 O '61

AMERICAN nuclear society
Winter meeting, San Francisco. Metal Prog 79:140+ Je '61

AMERICAN oil chemists society
Annual meeting, 52d, St Louis, May 1-3; with program. Am Oil Chem Soc J 38:sup20-1+ Ap; 25-6+ Je '61
Detergents session; spring meeting, St Louis, April 30-May 3; abstracts of papers. Soap & Chem Spec 37:48-9+ Je '61
Fall meeting, 34th, New York, Oct. 17-19; with list of exhibitors. Am Oil Chem Soc J 37:sup25-33 D '60
Officers and committees 1961-1962. Am Oil Chem Soc J 38:12-15 S '61
Report of the advertising committee, 1960-61. Am Oil Chem Soc J 38:sup 18-19 Je '61
Report of the Smalley committee, 1960-61. Am Oil Chem Soc J 38:305-6 Je '61
Report of the spectroscopy committee, 1959-60. Am Oil Chem Soc J 38:180-4 Ap '61
Report of the uniform methods committee, 1960. Am Oil Chem Soc J 38:224-5 Ap '61
Report of the uniform methods committee, May, 1961. Am Oil Chem Soc J 38:404-5 Ag '61
Third interim report of the A.O.C.S.-A.O.A.C. crude fiber liaison committee, 1959-1960. Am Oil Chem Soc J 38:150-1 Mr '61

AMERICAN oil company
Marketing drive launched by new American oil co. Oil & Gas J 59:111 My 29 '61
Name switch runs into work. Oil & Gas J 59:57 My 22 '61

AMERICAN optical company
American Optical takes first industrial power plant award of merit. A. W. Hindenlang. il Combustion 32:24-33 Ja '61

AMERICAN ordnance association
Castings section 2d annual meeting, Detroit, March 9-10. Foundry 89:277-8 My '61

AMERICAN petroleum institute
API honors going to 23 oil men. Oil & Gas J 58:106-7 N 14 '60
Annual meeting, 40th, Chicago. Oil & Gas J 58:121-42 N 21 '60
Annual tanker conference; abstracts of papers. Marine Eng/Log 66:63-4 Jl '61
Division of marketing and allied organizations meeting, Miami Beach. Oil & Gas J 59:104-5 My 29 '61

AMERICAN pharmaceutical association

Meeting, Washington, Aug. 14-20; abstracts of papers. Am Perfumer 75:55-6 N '60

AMERICAN physical society

Annual joint meeting with the American association of physics teachers, New York. Phys Today 14:52+ Mr '61

Division of high polymer physics meeting, Detroit, March 21-24; texts of papers. J Ap Phys 31:1849-938 N '60

AMERICAN power conference

Annual meeting, 23d, Chicago, March 21-23; abstracts of papers. Elec World 155:56-9+ Ap 17 '61; Power Eng 65:45-8+ My '61

Annual meeting, 23d, Chicago, March 21-23; program. Elec Eng 80:220-2 Mr '61

Annual meeting, 23d, Chicago. March 21-23; program with abstracts of papers. Combustion 32:57-61 F; 53-8 Ap; 46-54 My '61

AMERICAN public health association

Annual meeting, 88th, San Francisco; laboratory section abstracts of papers. Am J Pub Health 51:915-22 Je '61

Annual meeting, 88th, San Francisco, Oct. 31-Nov. 4; program. Safety Maint 120:33 O '60

Annual meeting, 89th, Detroit, Nov. 13-17; program, map, list of exhibitors. Am J Pub Health 51:1364-441 S '61

Committees 1960-1961. Am J Pub Health 51: 297-323 F '61

Committees reports. Am J Pub Health 51:464-75 Mr '61

Report of the chairman of the executive board to the governing council 1959-1960. J. D. Porterfield. Am J Pub Health 51:282-6 F '61

Report of the chairman of the technical development board to the governing council 1959-1960. R. P. Kandle. Am J Pub Health 51:287-94 F '61

AMERICAN public power association

Annual convention, San Antonio. Elec World 155:42-4 My 8 '61

Engineering and operations workshop meeting, Colorado Springs, Colo. Elec World 155:57-8+ Mr 27 '61

AMERICAN public works association

News bulletins. Published in monthly numbers of Public works

Top ten public works men-of-the-year honored by APWA. Pub Works 92:143-4+ O '61

AMERICAN radio relay league

Board of directors annual meeting, Anaheim, Calif. May 5. Q S T 45:51-8+ Jl '61

AMERICAN road builders association

Annual meeting, 59th, Atlantic City, March 5-8. Eng N 166:21-2 Mr 16 '61; Roads & Sts 104:70-1+ Ap '61; Civil Eng 31:88-9 Ap '61; Pit & Quarry 53:52 Ap '61

Board of directors semi-annual meeting, Washington, July 21. Roads & Sts 104:34 S '61

AMERICAN society for clinical nutrition

American institute of nutrition Clinical section meeting, Atlantic City, N.J., April 29; program and abstracts of papers. Am J Clinical Nutrition 9:244-53 Mr '61

Announcement; American society for clinical nutrition established. Am J Clinical Nutrition 8:787-8 N '60

Officers; charter members; constitution and by-laws. Am J Clinical Nutrition 9:127-31 Ja '61

AMERICAN society for engineering education

Annual meeting, Lexington, Ky. June 26-30. Mech Eng 83:92 Ag '61

AMERICAN society for metals

Metal show, Philadelphia, Oct. 17-21. Ind Finishing 37:12+ D '60

Western metal congress and exposition, 12th, Los Angeles; abstracts of papers. il diag Metal Prog 79:11-14 Ap '61

AMERICAN society for quality control

Annual convention and exhibit, 15th, Philadelphia, June 5-7; with program and list of exhibitors. Ind Quality Control 17:37-44 My; 18:26-31 Ag '61

Annual report of the board of directors. Ind Quality Control 17:33-8 N '60

Automotive division national conference, 4th, Detroit. Automotive Ind 125:41-4+ Ag 1 '61

Committee members and organization chart. Ind Quality Control 18:26-30 O '61

1961-62 society officers, executive directors and board of directors. Ind Quality Control 18:32-3 Ag '61

Textile division meeting, Winston-Salem; abstracts of papers. Textile World 111:72-4 Ap '61

AMERICAN society for testing and materials (formerly American society for testing materials)

Committee D-24 reports unfavorable results on black nomenclature proposals; meeting, Atlantic City, N.J. Aug. 9. Rubber World 144:96 S '61

Publications preview. il Materials Res & Stand 1:810-13 O '61

AMERICAN society for testing materials (now American society for testing and materials)

ASTM for the future; president's address. A. A. Bates. Materials Res & Stand 1:555-7 Jl '61

ASTM, the materials society; 1960 record of achievement. Materials Res & Stand 1:34-45 Ja '61

Annual meeting, 63d, Atlantic City, June 26-July 1. Eng N 165:26+ Jl 7 '60; Am Concrete Inst J 32:sup22+ Ag '60; Civil Eng 30:118 Ag '60; J Metals 12:876 N '60

Annual meeting, 63d, Atlantic Ciy, June 26-July 1; abstracts of papers on bituminous materials. Roads & Sts 103:110 D '60

Annual meeting, 64th, Atlantic City, N.J. June 25-30. Am Concrete Inst J 58(Proc):sup 18-19 Ag '61; Foundry 89:141-3 Ag '61; Pit & Quarry 54:115-17 S '61

Annual meeting, 64th, Atlantic City, June 25-30; program and abstracts of papers. Materials Res & Stand 1:293-306, 645-64 Ap, Ag '61

Committee D-11 on rubber and rubber-like materials meeting, Atlantic City, N.J. June 26-30. Rubber Age 89:817-21 Ag '61; Rubber World 144:82-6+ Ag '61

Committee week, Cincinnati, Jan. 30-Feb. 3. Materials Res & Stand 1:207-13 Mr '61

Committee week, Cincinnati, Jan. 30-Feb. 3; action on standards. Mag of Stand 32:140-2 My '61

Consultant takes ASTM helm. Eng N 167: 51+ Jl 6 '61

Fifty years of ASTM membership. M. J. Lawrence. Materials Res & Stand 1:641-2 Ag '61

Financial report, 1960. Materials Res & Stand 1:215-16 Mr '61

MIT awarded ASTM doctoral fellowship; grants-in-aid go to five schools to promote materials science through pure or applied research on materials. Materials Res & Stand 1:214-15 Mr '61

New ASTM publications. Published in monthly numbers of Materials research & standards

New officers; honors and awards. Materials Res & Stand 1:561-72 Jl '61

Soap/detergent bar standards: committee D-12 on soaps and other detergents of the American society for testing materials annual meeting, New York, March 6-7. Soap & Chem Spec 37:139+ Ap '61

AMERICAN society of body engineers

Annual technical convention; 15th, Detroit; abstracts of papers. Automotive Ind 123:49+ D 1 '60

AMERICAN society of civil engineers

Annual meeting, Boston, Oct. 10-14; with abstracts of papers. Civil Eng 30:48-55+ N '60

Annual meeting and civil engineering show. New York, Oct. 16-20; program. Civil Eng 31:72-80 S '61

Annual meeting, New York; abstracts of papers. Eng N 167:21-5 O 26 '61

Code of ethics as amended to be voted on by ASCE membership. Civil Eng 31:42-4 Je '61

Four elected to honorary membership. Civil Eng 31:79-80 O '61

Meeting, Phoenix, April 10-14; with program. Civil Eng 31:62-70 F; 42-7 My '61

Meeting. Phoenix, Ariz. Eng N 166:24-5 Ap 20 '61

National meeting, Phoenix, Ariz. April 10-14; abstracts of papers on water supply engineering. Water Works Eng 114:792+ S '61

New concept for technical programs. W. H. Wisely. Civil Eng 31:44-5 S '61

New York international airport wins ASCE achievement award. il Civil Eng 31:46 Mr '61

Prizes to be awarded during convention. Civil Eng 31:81-4 O '61

Surveying and mapping division, 1926-1960. Am Soc C E Proc 87 [SU 2 no 2859]:29-35 Jl '61

Ten new officers. Civil Eng 31:75-8 O '61

AMERICAN society of heating, refrigerating and air conditioning engineers

Amendments to the by-laws. ASHRAE J 2:71 N '60; 3:79 Ap '61

ASHRAE's consolidated guide and data book will appear in 1961. ASHRAE J 2:80-1 N '60

Annual meeting, 68th, Denver, June 26-28; abstracts of papers. Air Cond Heat & Ven 58:116-18 Jl '61

AMERICAN society of heating, refrigerating and air conditioning engineers—*Continued*

Annual meeting, 68th, Denver, June 26-28; with program and abstracts of papers. ASHRAE J 3:49-65+ Je; 61-74+ Ag '61
Engineers joint council and ASHRAE. E. R. Queer. ASHRAE J 3:56+ S '61
Heating seminar, 2d, Philadelphia chapter, Nov. 19; abstracts of papers. ASHRAE J 3:92+ Ja '61
Important policy decisions regarding the Society's research program. W. A. Grant; J. D. Kroeker. ASHRAE J 3:54-6+ Ja '61; Discussion. 3:66-8 Je '61
IIR and ASHRAE. ASHRAE J 3:43-4 Ag '61
Our ASHRAE environmental research program. B. H. Jennings. bibliog ASHRAE J 2:48-9; Discussion. 49-54+ N '60
Proposed environmental studies in the ASHRAE research program. R. G. Nevins and C. M. Humphreys. ASHRAE J 3:63-5 Ja '61
Semiannual meeting and exposition. Chicago, Feb. 13-16; program and abstracts of papers. ASHRAE J 3:30-48 Ja; 55-70 Mr '61
We are on the way; research and technical committee. S. F. Gilman. ASHRAE J 3:75-7 S '61
What you may expect on this and future national meetings programs. R. A. Line. ASHRAE J 3:27-9, 94 Ja '61

AMERICAN society of lubrication engineers

Annual meeting, Philadelphia, April 11-13. Lub Eng 17:212-17 My '61; Product Eng 32:98-100 My 15 '61
Annual meeting, Philadelphia, April 11-13; tentative program. Lub Eng 17:92-3 F '61
Who's who in lubrication; ASLE membership roster. Lub Eng 17:419-50 S '61

AMERICAN society of mechanical engineers

ASME elects twelve to grade of Fellow. Mech Eng 83:38-9 Ag '61
ASME elects members to grade of Fellow. Mech Eng 83:110-17 Mr; 124-6 Ag; 98-9 S '61
ASME elects twelve to grade of Fellow. Mech Eng 83:110-17 Mr '61
ASME headquarters; United engineering center. il plan Mech Eng 83:33, 106-9 O '61
ASME honors engineers; biographies of recipients, and descriptions of honors and awards bestowed in 1960. Mech Eng 83:106-13 Ja '61
ASME officers nominated. Mech Eng 83:112-18 Ag '61
ASME's professional divisions decentralize; four technical departments established. Mech Eng 83:102-3 Ag '61
Annual meeting, New York; abstracts of papers. Combustion 32:57-60 D '60; 46-54 Ja '61
Annual report, fiscal year Oct. 1, 1959-Sept. 30, 1960. il maps Mech Eng 83:sec 2 Ja '61
Council meeting, Los Angeles, June 11-12. Mech Eng 83:107-9 S '61
Engineering students win woman's auxiliary to ASME awards. Mech Eng 83:100-2 S '61
Inside ASME. M. Barrangon. Mech Eng 83:106 S; 132 O; 132-3 N; 124 D '61 (to be cont)
1960 availability list; annual meeting papers. Mech Eng 83:117-21 Ja '61
Petroleum mechanical engineering conference, 15th, New Orleans, Sept. 19-21. Mech Eng 82:125-8 N '60
Regional student conferences, April-May; lists of papers and prizes. Mech Eng 83:126-7 O '61
Summer annual meeting, Los Angeles, June 11-14. Mech Eng 83:105-9 Ag '61
Technology executives conference, 8th, Tuxedo Park, N.Y. Oct. 2-4. Mech Eng 82:122-3 N '60
Underwater technology group formed. il Mech Eng 83:139 My '61
Winter annual meeting, 81st, New York, Nov. 27-Dec. 2. Mech Eng 83:76-101 Ja '61
Winter annual meeting, New York, Nov. 27-Dec. 2. Power Eng 65:75-6 Ja '61
Winter annual meeting, New York, Nov. 26-Dec. 1; highlights, list of papers. Mech Eng 83:110-19 O '61
Woman's auxliliary annual meeting, New York, Nov. 27-Dec. 2. Mech Eng 83:114-16 Ja '61

See also

Design engineering conference
International heat transfer conference
Joint automatic control conference
National exposition of power and mechanical engineering
National power conference

Applied mechanics division

West Coast applied mechanics conference, Seattle, Wash. Aug. 28-30. Mech Eng 83:123-4 O '61

Aviation division

Conference, Los Angeles, March 13-15. Mech Eng 83:134-6 My '61

Gas turbine power division

Conference jointly sponsored with Dept. of defense, Washington, March 5-9. Mech Eng 83:132-3 My '61

Hydraulic division

ASME-EIC conference, Montreal, May 8-11. Mech Eng 83:95-6 Jl '61

Maintenance and plant engineering division

Conference, Worcester, Mass. April 10-11. Mech Eng 83:118-19 Je '61

Metals engineering division

Annual conference, Pittsburgh, April 23-25. Mech Eng 83:119-20 Je '61

Oil and gas power division

Annual conference and exhibit, New Orleans, April 9-13. il Mech Eng 83:116-18 Je '61

Production engineering division

Annual meeting, 4th, Toronto, May 9-12. Mech Eng 83:100-1 Jl '61

Rubber and plastics division

Conference, 1st, Erie, Pa. Oct. 9-11. Mech Eng 82:115 D '60
Meeting, Erie, Pa. Oct. 9-11; with abstracts of papers. Rubber Age 88:326-8 N '60

AMERICAN society of perfumers

Annual symposium, 7th; experimental findings on odor and olfaction. bibliog il diags Am Perfumer 76:38-66 Je '61

AMERICAN society of sanitary engineering

Annual meeting, 54th, San Diego. Dom Eng 196:14+ D '60

AMERICAN society of tool and manufacturing engineers

Engineering conference and tool exposition. New York City, May 22-26; program. Tool & Manuf Eng 46:97-106 Ap '61
Engineering conference and tool show, New York, May 22-26; floor plan, list of exhibitors, products on display. il Am Mach/Metalworking Manuf 105:157-86+ My 15 '61; Tool & Manuf Eng 46:129-60 My '61
Exposition and convention, New York, May 22-26; products on display. il Mach 67:141-63+ My '61
Meeting, New York, May 22-26; program and list of exhibitors. Iron Age 187:150+ Ap 27 '61

AMERICAN standards association

Annual meeting, Dec. 8. Mag of Stand 32:16-18 Ja '61
Company member conference, Chicago, June 1-2; with abstracts of papers. Mag of Stand 32:263-8 S '61
National conference on standards, 11th, New York, Oct. 25-27; abstracts of papers. Mag of Stand 31:356-78 D '60

AMERICAN stock exchange

American stock exchange to answer queries automatically. diags Automation 8:9 F '61

AMERICAN telephone and telegraph company

Annual report. Bell Lab Rec 39:144-5 Ap '61
Space communications proposal highlights annual meeting. F. R. Kappel. Bell Lab Rec 39:182 My '61

AMERICAN water works association

AWWA advancement program; joint discussion. E. F. Johnson and others. Am Water Works Assn J 53:1277-91 O '61
AWWA directory, 1961; reference edition. Am Water Works Assn J 53:1-192 pt 2 O '61
Annual conference, Detroit, June 4-9; program. Am Water Works Assn J 53:sup46+ Mr '61
Annual conference, 80th, Bal Harbour, Fla. May 15-20. Am Water Works Assn J 52:1581-92 D '60
Annual meeting, Detroit. Eng N 166:24-5 Je 15 '61
Annual meeting, 81st, Detroit, June 4-9. Civil Eng 31:82 Jl '61; Water & Sewage Works 108:sup5A+ Ag '61
Annual meeting, 81st, Detroit, June 4-9; with program, list of exhibitors and abstracts of papers. Water Works Eng 114:401-3, 620-1+, 712-13, 882 My, Jl-Ag, O '61

AMERICAN water works association—*Cont.*

Board of directors meeting; officers and awards for 1961. Water & Sewage Works 108:120-1 Mr '61

Committee reports, publications, auditors report for the year ending Dec. 31, 1960; membership awards, membership growth. Am Water Works Assn J 53:485-514 Ap '61

Forty years of progress. C. F. Wertz. Am Water Works Assn J 53:1273-6 O '61

General practitioner with a small-town practice; John Cramer, AWWA'S new president. Eng N 166:57-8 Je 1 '61

History of New Jersey section. S. F. Newkirk, jr. and P. S. Wilson. Am Water Works Assn J 53:453-7 Ap '61

Papers scheduled at 1960 section meetings. Am Water Works Assn J 52:1593-605 D '60

Pennsylvania section annual meeting, Pittsburgh, June 14-16; abstracts of papers. Water & Sewage Works 107:448-51 N '60

Survey of AWWA aims and objectives; committee report. Am Water Works Assn J 53:517-58 My '61

AMERICAN welding society

A. F. Chouinard elected 1961-62 president; other newly-elected officers. Welding J 40:533-4 My '61

Annual meeting; abstracts of papers. Am Mach/Metalworking Manuf 105:126 Ap 17 '61

Annual meeting, 42d, and AIEE electric welding conference, New York, April 17-21; program. Welding J 40:52-5 Ja '61

Annual meeting, 42d, and welding exposition, New York, April 17-21; program and list of exhibitors. Iron Age 187:138-42 Ap 6 '61

Annual meeting, 42d, and welding exposition, New York, April 17-21; with program and list of exhibitors. Welding J 40:403-12+, 636-40+ Ap, Je '61

Annual meeting, 42d, and welding show, New York. Welding Eng 46:56-8 Je '61

Fall meeting, Dallas. Am Mach/Metalworking Manuf 105:88 O 2 '61

Fall meeting, Dallas, Sept. 25-28; program. Welding J 40:957-61 S '61

National fall meeting, Dallas, Sept. 25-28; program. Welding J 40:653-6 Je '61

National officers for 1961-62 nominated. Welding J 39:1251-4 D '60

AMERICIUM

First observation of aqueous tetravalent americium. L. B. Asprey and R. A. Penneman. bibliog Am Chem Soc J 83:2200 My 5 '61

AMIDES

Chromatography of phenols, especially alkyl phenols, on paper impregnated wtih polyamides. W. N. Martin and R. M. Husband. bibliog Anal Chem 33:840-2 Je '61

Combination of enzymatic resolution with asymmetric transformation of the optically labile 3,4-dehydroproline amide. A. V. Robertson and B. Witkop. bibliog Am Chem Soc J 82:5008-9 S 20 '60

Formation and identification of unique radical sites in irradiated amides. E. J. Burrell, jr. bibliog Am Chem Soc J 83:574-7 F 5 '61

Isomerization of aldoximes to amides under substantially neutral conditions. L. Field and others. bibliog Am Chem Soc J 83:1983-7 Ap 20 '61

Molecular complexes and their spectra; complexes of iodine with amides, diethyl sulfide and diethyl disulfide. H. Tsubomura and R. P. Lang. bibliog Am Chem Soc J 83:2085-92 My 5 '61

N-nitrosoamides. E. H. White and C. A. Aufdermarsh, jr. bibliog Am Chem Soc J 83:1174-90 Mr 5 '61

New amides are highly polar, soluble. V. P. Kuceski. il Chem & Eng N 39:64-5 Mr 13 '61

Optically active polyamides and polymethacrylates containing sugar residues. T. P. Bird and others. bibliog Chem & Ind p 1331-2 O 22 '60

Parallel amide groups. W. S. Worrall. bibliog Am Chem Soc J 82:5707-11 N 5 '60

Polyamides containing isopropylidene sugar residues. T. P. Bird and others. Chem & Ind p 1077 Jl 15 '61

Preparation and decomposition of certain N-nitroamides and N-nitrocarbamates. E. H. White and D. W. Grisley, jr. bibliog Am Chem Soc J 83:1191-6 Mr 5 '61

Protonation of amides. G. Fraenkel and C. Franconi. bibliog diags Am Chem Soc J 82:4478-83 S 5 '60

Protonation of amides and their heterocyclic analogues. A. R. Katritzky and R. A. Y. Jones. bibliog Chem & Ind p722-7 Je 3 '61

Reversible formation of amides from free carboxylic acid and amine in aqueous solution; a case of neighboring group facilitation. T. Higuchi and T. Miki. bibliog Am Chem Soc J 83:3899-901 S 20 '61

Specific *ortho*-carboxylation of aromatic acids and aralkylamines; monothioimides and thiolactams. P. A. S. Smith and R. O. Kan. bibliog Am Chem Soc J 82:4753-4 S 5 '60

Wool fabric stabilization by interfacial polymerization; polyamides. R. E. Whitfield and others. bibliog il diag Textile Res J 31:704-12 Ag '61

See also
Formamide
Potassium amide

Analysis

Spectrophotometric determination of fatty acid amides in lipides. W. T. Haskins. Anal Chem 33:1445-6 S '61

AMINATION

Aminization of cotton; cost analysis application. S. P. Koltun and others. bibliog Am Dyestuff Rep 50:241-4 Ap 3 '61

Aromatic amination with alkylhydroxylamines. P. Kovacic and J. L. Foote. bibliog Am Chem Soc J 83:743-7 F 5 '61

Aromatic amination with hydroxylamine-O-sulfonic acid. P. Kovacic and R. P. Bennett. bibliog Am Chem Soc J 83:221-4 Ja 5 '61

Transamination of boron-nitrogen compounds. W. D. English and others. bibliog Am Chem Soc J 83:2122-4 My 5 '61

Unit processes review; amination by reduction. J. Werner. bibliog il Ind & Eng Chem 53:77-8 Ja '61

AMINE oxidase

Absolute optical specificity of monoamine oxidase. B. Belleau and others. bibliog Am Chem Soc J 82:5752-4 N 5 '60

Amine oxides; comparison of the elimination reactions forming olefins from the N-oxides and methohydroxides of amines of the type $R_2CHCH_2N(CH_3)_2$. A. C. Cope and D. L. Ross. bibliog Am Chem Soc J 83:3854-8 S 20 '61

Enzyme reaction retains configuration; studies with alpha-deutro-tyramine also reveal that monoamine oxidase acts as a stereospecific enzyme. B. Belleau and J. Burba. Chem & Eng N 38:46-7 N 14 '60

Oxidation of kynuramine derivatives by monoamine oxidase and the enzymatic conversion of dihydronorkynuramine to indigo. Y. Kanaoka and others. bibliog Am Chem Soc J 83:732-6 F 5 '61

AMINE oxides

Amine oxides. A. C. Cope and N. A. LeBel. bibliog Am Chem Soc J 82:4656-69 S 5 '60

Grignard reaction with quaternary salts of amine *N*-oxides; a new preparation of pyridine homologues. O. Cervinka. bibliog Chem & Ind p 1482 N 26 '60

Tertiary amine oxide rearrangements; mechanism. J. C. Craig and others. Am Chem Soc J 83:1871-8 Ap 20 '61

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Alkylation of amines with *t*-acetylenic chlorides; preparation of sterically hindered amines. G. F. Hennion and R. S. Hanzel. Am Chem Soc J 82:4908-12 S 20 '60

Amine boranes: dialkylamino alkylboranes and bis-(diethylamino) *n*-butylborane. M. F. Hawthorne. Am Chem Soc J 83:2671-3 Je 20 '61

Amine boranes; the hydroboration of terminal olefins, dienes and terminal acetylenes with trimethylamine *t*-butylborane. M. F. Hawthorne. bibliog Am Chem Soc J 83:2541-4 Je 5 '61

Amine complexes of aluminum hydride. J. K. Ruff and M. F. Hawthorne. bibliog Am Chem Soc J 83:535-8 F 5 '61

Amine complexes of aluminum hydride; substitution reactions. J. K. Ruff. bibliog Am Chem Soc J 83:1798-800 Ap 20 '61

Amine units sweeten sour gas in the field. G. Ellis. bibliog flow diag il Pet Eng 32:B68+ D '60

B^{11} n.m.r. chemical shifts; amine-borate ester complexes, alkoxydifluoroborane trimers and tetrahaloborate ions. H. Landesman and R. E. Williams. bibliog Am Chem Soc J 83:2663-6 Je 20 '61

Chemistry of boranes; reactions of boron hydrides with metal and amine salts. V. D. Aftandilian and others. bibliog Am Chem Soc J 83:2471-4 Je 5 '61

AMINES—*Continued*

Cleavage and disproportionation of polychlorodisilanes, trichloromethylchlorosilanes and hexachlorodisiloxane by amines and ammonium salts. G. D. Cooper and A. R. Gilbert. Am Chem Soc J 82:5042-4 O 5 '60

Cycloalkenyl amines make hydrocarbons; abstract. C. D. Wright and others. Chem & Eng N 39:52 Ap 3 '61

Effect of amine structure on the properties of cured polyurethane. A. J. Sampson and C. F. Blaich, jr. bibliog Rubber Age 89:263-8 My '61

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N,N-dialkyl-1-,1-dimethyl-2-butynylamines by the reaction of propyne with secondary aliphatic amines. C. W. Kruse and R. F. Kleinschmidt. bibliog Am Chem Soc J 83:216-20 Ja 5 '61

New low-cost inhibitor for amine-sweetening systems. H. R. Grady. Oily & Gas J 59:138 F 6 '61

Oxidative cleavage of tertiary amines to *N*-formyl-compounds by reaction with manganese dioxide or ozone; a radical mechanism for manganese dioxide oxidations. H. B. Henbest and M. J. W. Stratford. bibliog Chem & Ind p 1170-1 Jl 29 '61

Proton transfer studies by nuclear magnetic resonance; the mean life of the amine-water hydrogen bond in aqueous solution. M. T. Emerson and others. bibliog Am Chem Soc J 82:6307-14 D 20 '60

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Reactions of amines; the reactions of α-amino ketones with nitrous acid. H. E. Baumgarten and C. H. Anderson. bibliog Am Chem Soc J 83:399-404 Ja 20 '61

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Specific *ortho*-carboxylation of aromatic acids and aralkylamines; monothioimides and thiolactams. P. A. S. Smith and R. O. Kan. bibliog Am Chem Soc J 82:4753-4 S 5 '60

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Tertiary amines from methiodides and lithium aluminum hydride. A. C. Cope and others. bibliog Am Chem Soc J 82:4651-5 S 5 '60

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Methylamine
Triethylamine
Triphenylamine

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AMINO acid anhydrides. See Anhydrides

AMINO acids

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Gasoline industry
Geology
Hydroelectric plants
Labor and laboring classes
Labor supply
Mineral industries
Mines and mineral resources
Mining industry and finance
Mining law
Moving picture industry
Paint industry and trade
Paper and pulp mills
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Petroleum
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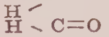
Italian  $\genfrac{}{}{0pt}{}{H\diagup}{H\diagdown}C{=}O$ route savors success. il diag Chem Eng 68:44+ F 6 '61
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Diffusion
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Flocculation
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Mass (chemistry)
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Refraction, Molecular
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Cosmetics
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Emulsions
Extraction processes
Filters and filtration (technical chemistry)
Fuel
Glass
Paper
Paper making
Petroleum distillation
Petroleum refining
Pottery
Refractory materials
Refrigerants
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Heat exchangers
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Collagen
Dispersion
Electrophoresis
Emulsions
Films
Flocculation
Gelatin
Liesegang rings
Micelles
Particles
Silica gel
Surface active substances
Suspensions
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COLOMBIA

See also subdivision Colombia under special subjects, e.g.

Floods
Hydroelectric plants
Moving picture industry
Petroleum
Petroleum laws and regulations
Television broadcasting

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Dyes and dyeing
Light, Colored
Pigments
Water purification—Color removal

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Oils and fats
Paper
Television

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Gas, Natural

Geology

Gypsum mines and mining

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COLORS

See also
Black
Blue
Brown
Gray
Green
Maroon
Pink
Tan
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Detonation
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Flash point
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Ignition
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Graphic panels
Hydraulic control
Joint automatic control conference
Liquid level control
Machinery, Automatic
Magnetic control
Numerical control
Pneumatic control
Servomechanisms
Telemetering
Temperature—Regulation
also subdivision Control and Control equipment under special subjects, e.g.
Air conditioning equipment
Airplane engines
Airplanes
Atomic power plants
Blast furnaces
Boilers
Chemical plants
Cranes, derricks, etc.
Crushing machinery
Electric plants (central stations)
Elevators
Gas burners
Gas compressors
Guided missiles
Heat exchangers
Helicopters
Hydroelectric plants
Machine tools
Machinery
Metallurgical plants
Milling machines
Moving picture machines
Nuclear reactors
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Paper making machinery
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Power plants
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Pumps, Feed water
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Cold storage
Cooling from central stations
Cooling towers
Cryostats
Heat convection
Heat pump
Heat transmission
Refrigeration and refrigerating machinery

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Cooling water
Quenching
Shrinkage of metals
Steel, Quenching of

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Airplanes, Supersonic
Blast furnaces
Brakes, Motor truck
Concrete
Condensers
Diesel engines
Electric equipment
Electric transformers
Electric welding machines
Electronic apparatus and instruments
Gas engines
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Cooling ponds
Cooling towers

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Cooling ponds
Cooling towers

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Coordinating research council, inc.
Electric service, Rural—Cooperative lines

COOPERATION, American institute of. See American institute of cooperation

COOPERATIVE apartment houses. See Apartment houses, Cooperative

COOPERATIVE associations

See also
Electric service, Rural—Cooperative lines
National rural electric cooperative association

COOPERATIVE education. See Engineering education—Cooperative plan

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Erosion of metals
Galvanizing
Gas, Natural—Condensate wells—Corrosion problem
Metal coating
Metal protection
Paint, Protective
Passivity
Tarnishing of metals
Water purification—Corrosion control
Water supply—Corrosiveness

also subdivision Corrosion under special subjects, e.g.
Airplanes
Aluminum
Automobiles
Boilers
Chemical plants
Condensers
Cooling towers
Copper
Gas turbines
Heat exchangers
Hot water tanks
Lead
Metallurgical plants
Motor trucks
Nickel
Oil tanks
Paper and pulp mills
Petroleum—Well casing
Petroleum—Well tubing
Petroleum pipe lines
Petroleum refineries
Pipe lines
Plutonium
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Tin
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Corrosion and anti-corrosives
Monel metal
Paint, Protective
Rubber
Steel, Stainless
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Heating
Industrial buildings
Packaging
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Sewage disposal plants
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Airports
Ammeters
Atomic power plants
Automobiles
Bearings

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Concrete construction
Cranes, derricks, etc.
Diesel engines
Electric plants (central stations)
Electric transformers
Electronic circuits
Factories
Heat exchangers
Hydroelectric plants
Machine tools
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Electronic control
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Servomechanisms
Switchboards
Thyratron
Valves—Electric control
Voltage regulation

also subdivision Control and Control uses under special subjects, e.g.

Airplanes
Electric heating
Electric motors
Electric motors, Alternating current
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Electric switchgear
Electric transmission
Electricity in mining
Switchboards

also subdivision Electric equipment under special subjects, e.g.

Airplanes
Airplanes, Military
Airports
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Coal mines and mining
College buildings
Cotton mills
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Office buildings, Industrial
Paper and pulp mills
Public buildings
Railroads
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Rubber factories
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Ships
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Electric currents
Electric distribution
Electric plants (central stations)
Electric transmission
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Electric welding, Arc—Power supply
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Magnetohydrodynamics
Power factor
Radio apparatus—Power supply
Steam plants—Combined power and heating
Tidal power

also subdivision Power under special subjects, e.g.

Cement plants
Chemical plants
Coal mines and mining
Metallurgical plants
Paper and pulp mills
Quarries and quarrying
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Textile mills

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See also

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Gages, Electronic
Musical instruments, Electronic
Numerical control
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Transducers
Translating machines

also subdivision Electronic equipment under special subjects, e.g.

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Wages
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Cement plants
Cotton mills
Electric plants (central stations)
Electric utilities
Food factories
Gas companies
Oil companies
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Paper and pulp mills
Paper box factories
Petroleum refineries
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Adenosinetriphosphatase
Amylases
Carbonic anhydrase
Carboxylase
Chymotrypsin
Coenzymes
Dehydrogenases
Esterases
Fumarase
Galactosidases
Glucose phosphatase
Glyoxalase
Lysozyme
Oxidases
Papain
Peroxidases
Phenolases
Phosphatases
Phosphoglucomutase
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Mines and mineral resources
Motor bus industry
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Paleoclimatology
Paper industry and trade
Petroleum
Petroleum industry and trade
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Excavating machinery
Shoring and underpinning
Street openings
Trenches
Tunnel shields
Tunnels and tunneling

EXCAVATION, Subaqueous
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Dredging
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Industrial buildings
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Factory costs
Hygiene, Industrial
Idleness, Industrial
Industrial engineering
Industrial management
Industrial relations
Inspection
Inventories
Janitors
Job work
Machine shop management
Material handling
Mechanical handling
Medical service, Industrial
Office management
Organization in industry
Packing for shipment
Photographic departments
Planning
Production
Production control
Purchasing
Quantities (in production)
Research departments
Safety devices and measures
Schedules
Shipment of goods
Shipping departments
Standardization
Stores systems
Suggestion systems
Tool engineering
Vacations

also subdivision Management under special subjects, e.g.

Airplane factories
Chemical plants
Concrete plants
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Food factories
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Drops
Equation of state
Flow meters
Gas flow
Hydraulics
Hydrodynamics
Jets
Liquids
Nozzles
Permeability
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Turbulence
Vaporization
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See also

Beryllium fluoride
Boron fluorides
Calcium fluoride
Cesium fluoride
Chlorine fluorides
Cryolite
Fluorspar
Lead fluorides
Lithium fluoride
Magnesium fluoride
Nitrogen fluoride
Perchloryl fluoride
Sodium fluoride
Thorium fluorides
Uranium fluorides
Vinyl fluoride
Water supply—Fluorine content

Analysis

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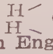
Italian  $\begin{matrix}H\\H\end{matrix}\!>\!C{=}O$ route savors success. il diag Chem Eng 68:44+ F 6 '61

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Crucibles
Cupola furnaces
Electric furnaces, Iron founding
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Grinding machines
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Gas, Natural
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Gasoline, Natural—Manufacture

Gasoline plants

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Heat pump
Heating from central stations
Hot water heating
Insulation (heat)
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also subdivision Heating and ventilation under special subject, e.g.

Apartment houses
Atomic research laboratories
Automobiles sales buildings
Churches
College buildings
Factories
Greenhouses
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See also

Anions
Cations
Counters (electrons, ions, etc.)
Dissociation
Electrolysis
Electrons
Hydrogen ion concentration
Ionization, Electrolytic
Ionization, Gaseous
Micelles
Solution (chemistry)
Zwitterions

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Airports
Building
Petroleum
Petroleum industry and trade

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IRELAND

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Electronics industry
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Cast iron

Water purification—Iron removal

Water supply—Iron content

Wrought iron

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Desulfurization

See Iron—Sulfur content

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IRON, Molten

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See also

Alnico
Ferromanganese
Steel alloys

Aluminum alloys

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Stage lighting
Street lighting
Tunnel lighting

also subdivision Lighting under special subjects, e.g.
Airplane factories
Airplanes
Airport buildings
Airports
Athletic fields
Automobile assembly plants
Bank buildings
Bowling alleys
Churches
Clubhouses
College buildings
Conference rooms
Control boards
Drafting rooms
Exhibition buildings
Factories
Florists shops
Garages, Municipal
Gardens
Golf links
Gymnasiums
Hangars
Heliports
Jewelry stores
Kitchens
Laboratories
Library buildings
Lobbies (architecture)
Machine shops
Memphis
Miami Beach, Florida
Moving picture photography
Municipal buildings
Opticians offices
Photography
Physicians offices
Piers
Playgrounds
Printing offices
Recreation rooms
Restaurants
Roads
School buildings
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Showrooms
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Air compressors
Air preheaters
Airplane engines
Automobile engines
Automobiles
Bearings
Bearings, Roller
Coal mining machinery
Compressors
Cotton machinery
Diesel engines
Electric motors
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Bending
Broaching
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Drilling and boring (metal working, etc.)
Forging
Foundry practice
Gages
Gear cutting
Grinding
Grinding machines
Grooving
Hard facing
Indexing (machine work)
Inspection
Lathes
Machine tools
Machinery
Metal cutting
Milling
Pantograph
Pattern making
Riveting
Sheet metal work
Stamping
Steel works
Thread cutting
Tolerance
Turning
Welding
also subdivision Manufacture under special subjects e.g.
Automobile engines
Axles
Bearings
Bearings, Roller
Carburetors
Crankshafts
Cylinders (engines, etc.)
Electric motors
Gas turbines, Aircraft
Gearing
Guided missiles
Gyroscope
Keys and keyways (machinery)
Machine tools
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Bending machines
Broaching machines
Chucking machines
Cutting machines
Cutting tools
Drilling and boring machinery
Gear cutting machines
Grinding machines
Honing machines
Lapping machines
Lathes
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Milling cutters
Milling machines
Planing machines
Pneumatic tools
Polishing machines
Presses
Punching machinery
Reamers
Saws, Metal working

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Tool steel
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Holding devices (machine work)
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Grinding
Holding devices (machine work)
Honing
Indexing (machine work)
Locating (machine work)
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Plastics—Cutting
Time study (of machinery)
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Broaching
Cutting machines
Cutting off machines
Cutting tools
Cutting tools, Carbide
Cutting tools, Ceramic
Drilling and boring (metal working, etc.)
Electric cutting
Electrochemical cutting
Gas cutting
Gear cutting
Grooving
Lubrication and lubricants (cutting and grinding)
Machine tools
Milling
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Bronze, Powdered
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Chromizing
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Enamel and enameling
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Painting, Industrial
Phosphate coating
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Brass work
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Cans, Aluminum—Manufacture
Chromium work
Copperwork
Dies
Electroplating
Extrusion process
Flanges
Forging
Foundry practice
Heat treatment
Machine tools
Magnesium work
Metal drawing
Metal spinning
Pickling (metals)
Plating
Punching
Punching machinery
Rolling (metal work)
Sheet metal work
Shells (metal work)
Shot peening
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MEXICO

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Gas, Natural
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Hydroelectric plants
Mines and mineral resources
Petroleum
Petroleum industry and trade

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Gas, Natural
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Petroleum industry and trade
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Airplanes, Jet propelled

Ear—Injuries

Ear—Protection

Radar—Interference

Radio communication—Interference

Radio communication—Interference elimination

Soundproofing

also subdivision Noise under special subjects, e.g.

Air conditioning equipment

Airplanes

Amplifiers

Amplifiers Transistor

Amplifiers, Vacuum tube

Automobiles

Crystal diodes

Diesel engines

Diesel engines, Automotive

Electric resistors

Electric transformers

Electronic apparatus and instruments

Gas turbines, Aircraft

Helicopters

Hydraulic machinery

Internal combustion engines

Machinery

Magnetic tape

Motor boat engines, Outboard

Motor vehicles

Moving picture studios

Oil burners

Oscillators

Pneumatic machinery

Radio receiving apparatus

Semiconductors

Shaking apparatus

Street traffic

Telephone

Television receiving apparatus

Transistors

Vacuum tubes

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Gas companies—Buildings
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Executives
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OHIO

See also subdivision Ohio under special subjects, e.g.

Coal mines and mining
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Geology
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OHIO oil company

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Boilers—Oil firing

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See also

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Cities service petroleum company
Continental oil company
Gulf oil corporation
Honolulu oil corporation
Humble oil and refining company
Lion oil company
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Petroleum pipe lines

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OIL pipes

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Pumps, Fuel

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Aeronautics
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Extrusion process (plastics)
Molded products
Molding
Molding machines (for plastics)
Plastic coating
Plasticizers
Plastics engineering
Printing on plastics
Resinous products
Saran
Thermoplastics
Tools, Plastic
Urethans

also subdivision Plastics under special subjects, e.g.
Automobiles—Materials
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Machinery
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Servomechanisms
Ship propulsion
Solar power
Steam
Wind power

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Gas companies
Machine shops
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Rubber factories

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Equipment

Diversification accompanies operating expansion; West Hills Sand & Gravel. B. C. Herod. il diag Pit & Quarry 53:94-7 Je '61

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Cedar Grove, Minnesota
Chelsea, Massachusetts
Chicago
Dallas
East Grand Forks, Minnesota
Fayette, Missouri
Hollywood, Florida
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Glauconite
Iddingsite
Kaolin
Mcgovernite
Magnesium silicates
Mica
Mullite
Natrolite
Orientite
Pegmatites
Potassium silicates
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Electric standards
Labor standards
National conference on standards
Production standards
Products, Certification of
Quality of products
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Standards engineers society
Television standards
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also subdivision Standards under special subjects, e.g.

Air conditioning
Air pipes
Amplifiers
Bearings, Ball
Bearings, Roller
Boilers
Castings
Containers (for shipping)
Control equipment
Drafting room practice
Electric apparatus and instruments
Electric conduits
Electric distribution
Electric motors
Electric motors, Alternating current
Electric transformers
Electric welding
Gearing
Hardness
Heat exchangers
Hygiene, Industrial
Insulation (electric)
Lighting
Machine tools
Medical apparatus and instruments
Metals
Moving picture films
Moving picture machines
Moving picture screens
Moving picture sound recording
Photography
Photometry
Pipes
Pipes, Aluminum
Piping (power plants)
Plastics
Plumbing
Pressure vessels
Pumps
Pumps, Turbine
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Building—Standards
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Fits (machinery)
Standardization

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Experimental design
Extrapolation
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Factories—Yards
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Acids
Chemicals
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Deformation (mechanics)
Elasticity
Fatigue in metals
Friction, Internal
Glass—Strains and stresses
Load (mechanics)
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Mohr circle diagram
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Chicago
Cincinnati
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Houston, Texas

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Minneapolis
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Petroleum pipe lines—Terminals
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Ports
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Impact
Laboratories
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Testing machines
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Airplane parts
Airplanes, Military
Aluminum
Beams and girders
Castings
Chromium plating
Clutches
Columns, Steel
Concrete
Concrete blocks
Copper plating
Corrosion and anti-corrosives
Corrosion resisting materials
Cotton fibers
Cutting tools
Electric cables
Electric equipment
Electric lines
Electric resistors
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Nickel plating
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Magnesium association
Malleable founders society
Manufacturing chemists association
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Chemical apparatus
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Heating industry
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Engineers—Unions
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Fumes
Mine waste
Mine water
Petroleum—Water problem
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Sewage disposal—Sludge and refuse mixing
Sulfite liquor
Waste, Utilization of
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Automobile factories
Brass works
Breweries
Canneries
Electroplating
Food factories
Foundries
Laundries
Metal working plants
Metallurgical plants
Paper and pulp mills
Petroleum refineries
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Oscillations

also subdivision Vibration under special subjects, e.g.

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Beams and girders

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Fire service (water supply)

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Pumping stations

Reservoirs

Water, Underground

Water collectors

Water conservation

Water consumption

Water distribution

Water districts

Water purification

Water supply engineering

Water tanks

Watersheds

Waterworks

Wells

also subdivision Water supply under names of places, e.g.

Asuncion, Paraguay

Augusta, Maine

Bethany, Missouri

Boston

Carmichael, California

Chicago

Daytona Beach, Florida

Denver

Detroit

Dickinson, North Dakota

Edinburgh, Scotland

El Paso, Texas

Englewood, Colorado

Fullerton, Nebraska

Geneva, New York

Holyoke, Massachusetts

Hong Kong

Hopewell, Virginia

Hyde Park, New York

Incline Village, Nevada

Jasper, Alabama

Kotzebue, Alaska

Lenoir City, Tennessee

London

Los Angeles

Madison, Wisconsin

Milwaukee

Montclair, New Jersey

Montreal

Murfreesboro, Arkansas

New York (city)

Oakland, California

Oklahoma City

Oshkosh, Wisconsin

Ottumwa, Iowa

Pasadena

Philadelphia

Phoenix, Arizona

Pittsburgh

Plainview, New York

Pomona, California

Poughkeepsie, New York

Richmond, Virginia

Rochester, Michigan

St Paul

San Antonio

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